TECHNOLOGY DEPT.

PUBLIC LIBRARY
MAR - 3 1943
DETROIT

It's Important to Know In Time'

Member Associated Business Papers, Inc.; Audit Bureau of Circulations.

The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory

AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★

Technical Governmental

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1943, by Business News Publishing Co.

'Written To Be Read on Arrival'

Issued Every Monday at Detroit, Michigan

MARCH 1, 1943

Vol. 38, No. 9, Serial No. 728
Established 1926.

Inside Dope

By George F. Taubeneck

War Situation Improves
Office of Civilian Supply
Congressional Resurgence
Russian Campaign
Turkey and Finland—Also Italy
The French Muddle
Hitler-Tojo Deal
Share the Misery
Future Fullback

War Situation Improves

To the naked eye it is apparent that the position of the United Nations is bettering itself at a rapid pace. Optimistic forecasts based on new facts are being suppressed lest the nation relax its efforts.

Big idea is this: "Let's step up our efforts tremendously, so we can slam home a knockout punch while they're wobbling groggily."

There still is fear that Germany and Japan may have surprises up their sleeves. That fear is soundly based on past performances, although it seems to have no basis as far as present information goes. Germany's troubles stem back to lack of oil. Where is Hitler? That's a good question.

Our attention is currently directed to the German submarine menace on the Atlantic. At the same time, it might be noted that without fanfare our own submarines on the Pacific are doing plenty to Japan's lifeline.

Ambassador Grew is eminently right in warning us about the toughness of the Nipponese. But all the fighting spirit, ability to subsist on a handful of rice, and sense of sacred destiny will not overcome interruption of their supplies. They can't fight long with bare fists.

Office of Civilian Supply

New emphasis in the WPB's Office of Civilian Supply is interesting. Formerly, these were the boys who were hot for curtailing the civilian economy. Now, believe it or not, they are preparing to protect it. This new attitude will begin to show up soon, we understand.

It's entirely possible that to strengthen this new position the OCS will move out from WPB to shelter under the wings of a new boss, Jimmy Byrnes.

Congressional Resurgence

In this column of Jan. 4, it was noted that the biggest news was the resurgence of Congress. The boys with the string ties, it was said, were beginning to reassert themselves.

Do you see the signs?

Russian Campaign

Military analysts are again happily surprised at Russia's unexpected reserve strength and resiliency. They say that the Russians have won no major victories as yet, however.

Major winter objectives are probably Rostov, Rzhev, Smolensk, Bryansk, Kursk, Kharkov, and Dnepropetrovsk. This is the "last line" of German defenses short of the Reich itself. If most of these objectives are taken, observers are confident that the Germans can be pushed out of Russia next year with the aid of an increased supply of American weapons.

This latter provision—more aid to Russia—may not be realized, some say, unless certain Army leaders are unsold on the idea of America doing the major fighting job on all fronts itself. There is a disposition on the part of some to ignore the fact that

(Concluded on Page 2, Column 1)

Two Postwar Periods

As readers of the NEWS know, this publication has been advocating the release of at least half the household refrigerators now held in useless "frozen" condition.

We have pointed out that it is much easier for a war worker to get an automobile than a refrigerator, and that refrigerators are vitally needed in population-swollen war production centers.

It has also been noted that ice refrigerator manufacture is being allowed this first quarter up to 150,000 units—despite the fact that ice delivery requires scarce tires, gasoline, trucks, and manpower.

In this connection it should be reported that talk of a "Victory" model automobile is being heard in the corridors. It is said that when Hitler is subdued, our war production facilities will be far greater than will be needed for the licking of Japan, and something will have to be done to maintain the nation's industrial labor force at full capacity.

That means *two* postwar periods: after Hitler, after Tojo. In the first period, limited resumption of consumer durable goods manufacture might not only be permitted, but would be considered highly desirable. That being the case, mechanical refrigerators would follow automobiles in the "resumption phase."

Should that happen, the present excessive frozen stocks of mechanical refrigerators would be a glacier that would have to melt before a market for new refrigerators would be available.

Let's unfreeze at least half the supply right now.

Sale Regulations Are Eased on All Types of Farm Milk Coolers

DETROIT—Regulations concerning the manufacture and sale of farm milk coolers have been liberalized since the first of the year, a review of the regulations affecting these operations reveal.

It is still necessary for the purchaser of farm milk cooler equipment to obtain a purchase certificate from his Local County Farm Machinery Rationing Committee, but most of the "red tape" is no longer necessary.

This, in substance, is the situation on farm milk coolers:

The production of immersion type milk coolers is regulated by WPB Order L-170. This order permits the Class "C" producer to manufacture 48% of the 1940 or 1941 production, whichever is greater. Class "A" and Class "B" manufacturers were not allowed to manufacture any milk coolers under L-170.

The "freeze" order on milk cooling equipment was lifted on Jan. 12 by a Rationing Order C of Supplementary Order 3, covering new farm machinery and equipment. This order permitted manufacturers to ship milk cooling equipment produced under the old WPB Order L-26 or under the new WPB Order L-170.

However, no manufacturer is allowed to sell more than 80% of what he is allowed to produce under L-170. The remaining 20% of his quota of Schedule I equipment must be held in stock, pursuant to further orders from the Secretary of Agriculture or from the Special War Board Assistant to the Secretary of Agriculture.

Rationing Order C, Announcement 2, regulating new farm machinery and equipment, states that no quotas will be presently established for certain equipment and includes farm milk coolers of the immersion type and surface or tubular aerators. This means that the Rationing Program previously proposed to cover milk coolers has been abolished and permits County Farm Rationing Committees to issue Purchase Certificates to dairy farmers requiring an immersion type milk cooler or tubular aerator.

The only requisite necessary is that the purchaser secure a Purchase Certificate from his Local County Farm Machinery Rationing Committee. The Purchase Certificate is delivered to the dealer, who is permitted to make the installation.

It isn't necessary for the dealer to forward the Purchase Certificate or any preference rating to the manufacturer. Furthermore, it isn't necessary for the purchaser to locate in a dealer's stock a particular type and size of milk cooler to meet his requirements before he can be issued a Purchase Certificate.

For a time some County Agricultural Rationing Boards felt this was necessary. However, it would be almost impossible for the purchaser to locate within a certain specified area the milk cooler of the type and size which he particularly wanted and needed, because of the fact that very few dealers stock a large quantity of milk coolers because of the many sizes and types available.

Manufacturers have been advised by the U. S. Department of Agriculture and the WPB to follow their normal distribution patterns as in the past years.

Cork Available for Refrigerator Insulation Jobs

WASHINGTON, D.C.—Because the supplies of cork in this country have more than doubled since June, 1941, the Director General for Operations on Feb. 20 relaxed the restrictions of General Preference Order M-8-a governing use of cork and cork products.

The principal change in the order as amended is the elimination of restrictions on the processing and delivery of cork insulation board. The main use of this board at present is for refrigerator construction for the preservation of food.

According to the Cork, Asbestos, and Fibrous Glass Division of WPB, there is at present enough cork in the country to last for at least three years on a non-substitutable basis. In addition, imports are continuing regularly at present, and industry owns a substantial inventory of finished products.

The amended order will result in cork insulation board being more freely used in the applications for which it is best adapted. The order, however, continues the control of cork and corp products through allocation to manufacturers and importers.

Industry Conclave At Chicago In April Planned

PITTSBURGH — Tentative plans for a "Refrigeration Industry Wartime Conference" April 13 and 14 in Chicago were discussed at a meeting here Feb. 23 attended by representatives of refrigeration supply jobbers, refrigeration servicemen, and refrigeration equipment manufacturers' groups.

As outlined at the meeting last week the "Wartime Conference" would be conducted somewhat along the lines of the "General Industry Conference" held last Nov. 19-20 in Chicago.

Present at last week's meeting to consider the Conference plans were Alex H. Holcombe, Jr., Victory Sales & Supply Co., president of the National Refrigeration Supply Jobbers Association; H. S. McCloud, Williams & Co., Pittsburgh, a director of the N.R.S.J.A.; J. M. Oberc, J. M. Oberc, Inc., member of the manufacturers relations committee of the N.R.S.J.A.; Fred B. Hovey, executive secretary, N.R.S.J.A.; R. Kennedy Hanson, executive secretary, Refrigeration Equipment Manufacturers Association; and J. W. Power, acting secretary, Refrigeration Service Engineers Society.

Mr. Holcombe had also asked a number of manufacturers of refrigeration parts and equipment to be present for a check on the probable quantities of refrigeration parts that will be available. Manufacturers present included G. E. Graff, Ranco, Inc.; S. Forbes and K. M. Newcum, Superior Valve & Fittings Co.; J. W. Krall, Detroit Lubricator Co.; and James A. Strachan, the Weatherhead Co.

In considering the program for the "Wartime Conference," it was thought best to devote the Conference largely to a discussion of the production of refrigeration parts and equipment, and priority problems.

Any member of the industry, according to the plan, would be invited to submit questions on production and priorities, which would be submitted to one or more committees (to be named later) who would "winnow out" the more important questions and see to it that they were answered on April 13 and 14.

Refrigeration supply jobbers are requested to send such questions as they may have to Mr. Hovey at the N.R.S.J.A. offices at 28 N. Clark St., Chicago, who will submit them to an association committee consisting of the following: Mr. Oberc, chairman; Harry Alter, Chicago; R. M. Graves, Atlanta; Mr. Holcombe; Joseph M. Mideke, Oklahoma City; Carle P. Payson, Springfield, Mass.; and Clarence F. (Sandy) Pratt, San Francisco.

It was decided to hold the annual meeting of the N.R.S.J.A. on April 13, at which time new directors will be elected.

They Believed In the Industry, Themselves

We're proud to publish the story that appears on pages 4 and 5 of this issue—proud not only because it tells an interesting, useful, and inspiring story, but proud because it relates how a member of the refrigeration industry pulled himself up by his bootstraps and at the same time gave our war effort the maximum benefits.

It is the story of the Conditioned-Air Equipment, distributor of General Electric commercial refrigeration equipment in St. Paul, Minn., and of how the members of the company used their skill and knowledge of what refrigeration can do to keep going and to help solve the problems of some major war industries.

P-126 Is Little Affected By the CMP Operations

'P' Orders Continue for Service Fields; Tubing Problem Is Covered

WASHINGTON, D. C.—How will the refrigeration industry operate under and be affected by the Controlled Materials Plan, better known in the government alphabet-jargon as "CMP?"

For the present, at least, it would seem that the refrigeration industry will continue to operate under existing government regulatory and restraining orders, with CMP regulations having little effect upon them, for the time being at least.

In the case of Order P-126 which grants preference ratings for repair and maintenance parts, it is the opinion of industry authorities that CMP Regulation No. 5 will have no effect whatever on Order P-126. This is for the reason that while the general run of "P" orders are issued to industries which are producing various materials considered essential to the prosecution of the war, Order P-126 is issued to members of an industry performing a service for the users of products of an industry.

In other words, if a "P" order was issued to manufacturers of refrigerating machinery, then CMP Regulation No. 5 would likely supersede such a "P" order. However, since Order P-126 is issued to Joe Doakes who uses the products of the manufacturers in repairing the installed machinery, it would not be affected.

Primary purpose of the CMP is to establish an improved method of funneling out strategic materials to the nation's producers of goods. "Controlled materials" at the present mean carbon steel, alloy steel, copper, and aluminum. However, other materials may be added to this list at any time.

These "controlled materials" are raw materials, and under the definition of "raw materials" about the only item of this nature that contractors and service firms in the field might buy direct is copper or steel tubing.

Under CMP Regulation No. 4, however, provision is made for "warehouses" (which has been generally interpreted to mean a supply jobber who handles tubing) to distributed "controlled materials" either for an authorized controlled materials order, or for an order bearing a preference rating of AA-5 or higher. There are restrictions on the total weight of such items that may be taken by any one individual at one time, or in one month's time.

There has been some opinion (none of it official) that refrigeration service and repair shops should file a form CMP-4B to get an allotment number. This would hardly seem necessary, however, unless a repair shop was of the kind that used considerable amounts of raw materials in its shop work.

"Refrigeration and air conditioning equipment" is listed under that heading in the CMP's list of Class B—

(Concluded on Page 16, Column 1)

Hussmann-Ligonier Co. 1942 Profit $298,342

ST. LOUIS—Corporate report of Hussmann-Ligonier Co. and its wholly owned subsidiaries shows a net profit for 1942 of $298,342 after reserve of $401,742 for Federal income and excess profits taxes. This represents, after preferred dividends were paid, $1.57 a share on common stock.

In 1941 the net profit was $344,800, or $1.84 a common share.

Inside Dope

(Concluded from Page 1, Column 1)

we have Allies with experienced armies.

Some members of the State Department feel that way, too—believing that the more of the fighting we have done, and the bigger the Army we have in the field, the better we'll be able to rearrange the boundaries of Europe to suit ourselves when the peace terms are written.

Personal ambitions, of course, are bound up with such attitudes.

Turkey and Finland— Also Italy

That Turkish agreement (still secret as to details) wangled by Churchill probably will be plenty important. It indicates that the larger remaining neutrals are now convinced that Hitler is through. Watch them run to jump on the bandwagon.

Sorely beset Finland may only be waiting for proper guarantees of her independence, and there may be **sub rosa** negotiations with the Italians a-brewing, too.

The psychology is much like that of an American presidential party convention. When the probable winner emerges, his support snowballs like magic.

All this talk may sound unduly optimistic, and it undoubtedly is premature. But please remember that we were "premature" in 1940 in our talk of inevitable war and resultant cessation of consumer durable goods manufacture.

We hoped we were wrong then. Now we hope we are right.

The French Muddle

One continues to hear that the campaign in North Africa is slowed up almost as much by fifth-columnism as it is by rains, mud, and submarines. The French are just as wildly factionalized as they were before the Germans took them over, and apparently even more ready to fight among themselves than to fight the common enemy.

English diplomacy, unfortunately, is all wound up in this deplorable situation. The English want DeGaulle to be the top man, both in Africa and in France after the war. DeGaulle is their man. Hardly any other French leader is. And there is said to be some disaffection in the minds of the French people toward the British.

It is significant that the French leaders in Africa, who gave us Algiers and Morocco so cheaply, and invaluable Dakar without a struggle, insisted that they had turned over the keys to their cities to the Americans, not the British. The latter could never have pulled that coup. They would have had a whale of a fight on their hands, as they did when they tried unsuccessfully (with DeGaulle) to storm Dakar.

The French seem to be strongly suspicious that the British mean to take over the French colonial empire. America, on the other hand, has no such motives, they believe.

So the fight goes on. It is a tremendous handicap to Eisenhower and Clark, who have no time for political finagling.

Hitler-Tojo Deal

Military commentators have puzzled over two of last fall's developments: (1) Why Japan failed to attack Siberia, after concentrating the bulk of her Army on the border up there; and (2) Why Hitler wasted so many men and planes and tanks on the unsuccessful attempt to storm Stalingrad.

Inside story is that Hitler and Tojo made a deal whereby the Japs would attack Siberia whenever Stalingrad fell to the Nazis. There were sound military reasons for such timing, and the Germans felt sure they could complete their end in September, which would have provided the best fighting weather in Siberia. Knowing of the deal, the Russians hurled enormous reserves into the breach, and thus avoided a two-front war.

Thus the battle of Stalingrad may go down in history as the decisive battle of World War II.

Share the Misery

Much favorable reaction — letters and phone calls—came from our editorial, "Share the Misery," in the Jan. 18 issue of the NEWS.

One might guess that somebody sent a clipping of this editorial to Paul Mallon, Washington columnist, for last week he wrote:

"This kind of foolish thinking presumes that inasmuch as murder is also common in other parts of the world right now, we should have murder at home as a patriotic duty, and even promote a little of it so we, too, would know how others feel when they are murdered."

You may recall that we used a milder simile to the effect that, should this "share the misery" philosophy be followed to its bitter end, if one man broke his leg, all the rest of us would have to break our legs, also, just to share the "sacrifice."

Of course the theory is absurd. We need a strong nation, just as we need a strong army. That some of our soldiers shall be wounded is inevitable. But what nut would advocate that all our soldiers should then be wounded so as to make it "fair" for all?

The same thinking applies to the civilian front. Civilian casualties must be held to the minimum, rather than encouraged or forced, if our boys are to be supplied with the things they need—and if anything is to be left for them to come back to when they again seek employment in civilian life.

Future Fullback

Readers of this column, we hope, will be interested to learn that we are the exceedingly proud father of a healthy young son who, after three weeks, weighs 10 pounds and is helping cause a shortage in canned milk.

His name is G. Gregory. Judging by his present strength, chest expansion, etc., someday he is going to make a terrific fullback. Alumni of famous football institutions please note. The line forms to the right.

Among the alleged messages of congratulations were these:

Congratulations. Now you know how I felt out there on that raft.
EDDIE RICKENBACKER

Yanks will better any offer for your future shortstop no matter what Walter Briggs tells you.
JOE McCARTHY

Wire your lowest price Gregory Taubeneck's services to replace Mickey Rooney in Andy Hardy series have seen footage of Gregory's mugging it's terrific.
LOUIS MAYER

Sending camera crew Detroit immediately to photograph Gregory for Life cover as Baby-of-the-Year understand you're a sight worth recording also.
HENRY LUCE

Need a good production man like you down here offer you position Director General for Liaison of Sources New Manpower.
DONALD NELSON

Throwing corned-beef-and-cabbage party for Gregory at the Greasy Spoon. Harry and Louise ate me out of caviar.
BERNARD BARUCH

Office of Civilian Supply glad to know you have supplied another civilian. They are a vanishing species.
JOE WEINER

University of Illinois football and basketball teams want Gregory Taubeneck. If draft continues present rate may want him very soon. On second thought, if he's anything like his old man, send him to Michigan.
DOUG MILLS

We are setting up trust fund for Gregory consisting of all money we have won from his daddy at poker these many years. P.S.: We're only kidding.—ED FLANNERY, FRANK GLEASON, B. SCHOLL, JIM HOOD.

Send me a cigar.
WINSTON CHURCHILL

The vodka's on me.
JOE STALIN

Sending Gregory one of my diapers.
MAHATMA GHANDI

If you can't send us any planes or guns, send us Gregory.
CHIANG KAI SHEK

As the fervid setting sun burns through the lurid haze of the turgid Coral Sea our valiant men rise to salute the new hope of our ever-growing armed forces.
GENERAL DOUGLAS MacARTHUR

Gregory classified 1-A should report for induction tomorrow.
GENERAL HERSHEY

Abadabba abbadabba abbadabba abbadabba burp.
MUSSOLINI

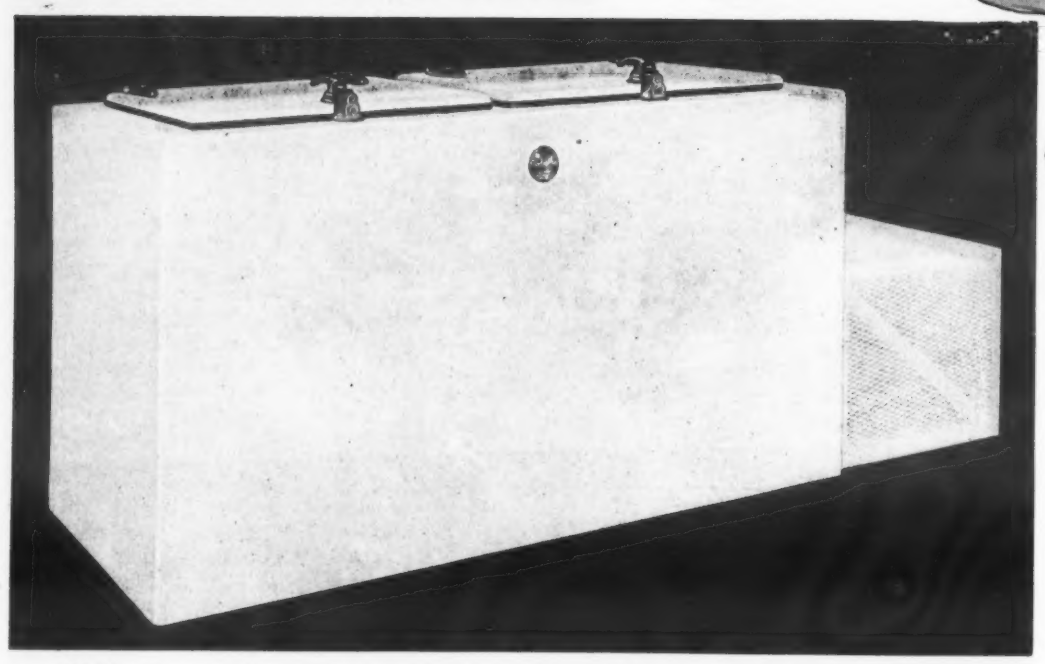
Dinkum Aussies will have another go for new cobber Gregory.
FRANK HANSEN

Congratulations on adding so nobly to Amurrica's reservoir of manpar.
WENDELL WILLKIE

Can spare 3½ minutes for christening Saturday between committee meeting New Youth for World Betterment Movement and Kaiser shiplaunching.
ELEANOR

Continental
FARM LOCKER PLANT

★ SAVES SURPLUS FARM FOODS
★ REDUCES FOOD COSTS
★ ADDS VARIETY to MEALS
★ SAVES TIRES and GASOLINE
★ GIVES FARMERS MORE TIME FOR PRODUCTIVE WORK



Model No. C-1242. Capacity, 11.5 net cu. ft. Holds up to 575 lbs. frozen foods.

Buy WAR BONDS Now!

FOR VICTORY BUY UNITED STATES WAR BONDS STAMPS

And Farm Locker Plants after the WAR

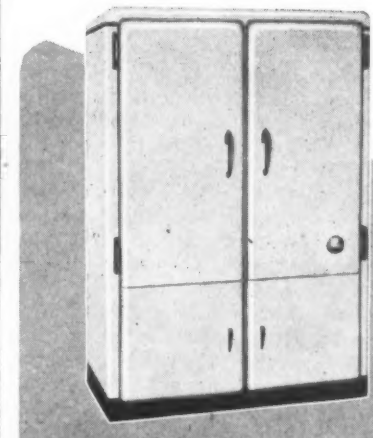
Here's one of the most important and valuable developments in Refrigeration . . . Food FREEZING and FROZEN STORAGE facilities RIGHT IN THE FARM HOME! Frequently saves enough food (now being wasted) to practically pay for the unit.

The CONTINENTAL FARM LOCKER PLANT will quickly freeze surplus garden-fresh vegetables, fruits, berries, as well as farm-killed meat, poultry, and game — to give the Farm family adequate food — without those too-frequent trips to town.

SANITARY REFRIGERATOR COMPANY
FOND DU LAC, WISCONSIN, MANUFACTURERS 1-E-43

ARMY E NAVY MIDWEST flies the "E"

16 TO 71 CU. FT.



THIS COMPLETE 'REACH-IN' LINE MEETS EVERY NEED!

In war or peace, *Midwest serves* . . . fulfills every demand of the times. Today, as always, Midwest Cabinets are distinguished by sound, sturdy construction and outstanding value.

Model 160 (above) popular, practical 16 cu. ft. model—smallest of the complete Midwest 'Reach-in' line.

Model 700 (right) is the largest standard Midwest 'Reach-in'. 71.5 cu. ft. capacity. There is also a complete range of sizes and equipment *between* 16 and 71.5 cu. ft.

★ ★ Midwest MFG. COMPANY
Galesburg, Ill., U.S.A.
Export Division, Merchandise Mart, Chicago, Ill.

Refrigeration and Air Conditioning As a War Production Tool

By L. W. Clifford, Sales Development Section Supervisor, Westinghouse Electric & Mfg. Co., East Springfield, Mass.

Protection of Various Critical Instruments

Critical instruments, in the performance of their respective duties, invariably reflect, in precision and appearance, the care and protection which is given them during their moments of utility and the possibly even more important periods when they are being stored in anticipation of use.

Not only must the instruments be guarded against shock and rough handling but they must be adequately protected against adverse atmospheric conditions, particularly abnormally high relative humidity values and air-borne dust, which will cause corrosion of pivots and bearing surfaces as well as rapid deterioration of the instrument cases.

Our Armed services, in their conquest of distance and space, have learned this lesson well. Instruments for navigation, for testing the implements of war, for incredible accuracy in bombing and gunnery, for communications equipment—all receive the finest care that modern air conditioning can provide.

Let's review some examples of this care.

At a large southeastern Naval Base a unit and a water chiller were installed to provide perfect storage conditions for one of our most important of all instruments of warfare.

At a gunnery school in the southwest two Unitaires condition the atmosphere in the instrument storage rooms.

An air conditioner was installed for the airlines at a Florida field to protect their store of instruments against the hazards of abnormal atmospheric conditions.

At another southwest gunnery school eight Unitaires are used to condition the instrument storage rooms.

At a U. S. Naval Air Station in Florida, the instruments are stored under perfect conditions in rooms conditioned by an air conditioning system.

Leff Engineering Expands As War Work Grows

MOBILE, Ala.—Leff Engineering Co. of this city has moved into its new home at 706 S. Washington Ave. The concern represents the Frick Co. in the refrigeration field.

Beginning two years ago with two employes it now has 60 and holds important contracts on naval ships and military bases. Gerald Leff is the proprietor and associated with him are William Reid Martin, chief engineer; James Strickland, general superintendent; Erving Heblon, engineer and Pat Kelley, shop superintendent.

Federal Insurance For Small Business Urged

NEW YORK CITY—A suggestion for a Federal small business insurance corporation has been made, in the form of a resolution forwarded to the Senate Small Business Committee, by the American Business Congress meeting here. Premiums of this corporation would be carried "by those who benefit chiefly from the activities of America's small business firms."

Nat Bass, sponsor of the resolution and director of the Congress, explained that premiums would be paid by large corporations depending upon the distributive setup of smaller businesses. Operating funds for the proposed corporation, he suggested, could be provided by using a small percentage of dividends received by stockholders.

New Temprite 'Solution' Cooler Used As Control Instrument For Industrial X-Rays

DETROIT—A refrigerating unit has recently been introduced by Temprite Products Corp. here as a control instrument for industrial X-ray machines being used in flaw detection and inspection of war materials.

Specifically, Temprite's new model 555-PD is said to be designed to maintain uniform solution temperature, one of three factors which must be kept within extremely accurate limits in processing X-ray films. The other two variable factors, immersion time and solution strength, are controlled by the operator, Temprite explains, whereas solution temperature depends on conditions under which equipment is used and can vary from time to time.

To eliminate possible changes in operating conditions, Temprite developed model 555-PD to circulate large quantities of controlled temperature water (at a recommended 65°) around the processing solution containers in the development tank. The unit also provides a constant supply of clean, controlled temperature water for washing film or plates, since used water is drained off and not recirculated.

Unique feature of the unit, states Temprite, is that waste water contacts the fresh water inlet coil thus precooling it and permitting use of much smaller refrigeration equipment on high capacity installations.

The company also points out value of a simple adjusting handle on the outside of the cabinet whereby the normal controlled water temperature of 65° may be lowered to 45° for quick cooling in case fresh chemicals are dissolved in high temperature water or the system has been closed for a considerable period of time.

Distribution of 555-PD is being handled through dealer and jobber organizations, Temprite reports, and installations are now being made in plants using industrial X-ray.

• • •

BOUND FOR UNKNOWN PORTS

TODAY ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆

In the early morning mists, a great convoy steals away for unknown ports, with its precious cargoes of men, munitions and food. Food for consumption on the voyage, for our boys in far-away countries, and for the oppressed peoples all over the world. Food, kept fresh and wholesome by refrigeration; only one of the many ways in which the refrigeration industry is helping to speed Victory.

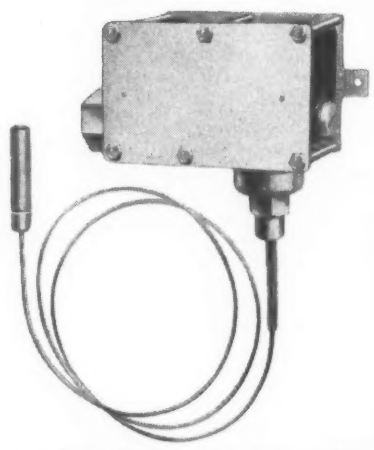
"DL" Contact Makers (Controls), specially designed for the rigors of wartime service, are in use today, by the thousands, on Maritime and Naval vessels, large and small, accurately controlling temperatures of food storage compartments, holds, refrigerated cases, etc., as well as protecting their engines from damage due to insufficient cooling or lubrication.

TOMORROW . . . . . .

The refrigeration industry will continue to play one of the most vital parts in our civilian life, assuring everyone a supply of fresh, wholesome food, in or out of season.

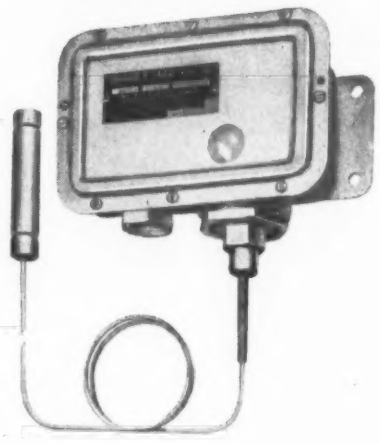
Fresh seafood for the rancher in Arizona; fresh raspberries in January for the businessman in Boston. Low temperature storage units, and multiple temperature units for storage of meats, fruit, and frozen foods for the home will be within the reach of all.

The valuable data gained by the industry in production for war, will be used to make better products for peace. "Detroit" products then, as now, and as in the past, will continue to be the best that it is possible to produce for the refrigeration industry.



THESE PRODUCTS HAVE BEEN ESPECIALLY DESIGNED FOR WAR-TIME SERVICE

The No. 220 Hi-Shock Contact Maker is designed to withstand a 2000-ft. pound shock and will operate when completely submerged in water to a depth of 25 feet.



The No. 250-WT Water-Tight Contact Maker is designed for wet locations, where conditions may subject it to drippage or spray. It will operate submerged to a depth of three feet.

The above contact makers are available in refrigeration ranges for control of air, or liquid temperatures.

Write for Bulletins 204 and 206 for further data.

DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Division of American Radiator and Standard Sanitary Corporation

Canadian Representatives—Railway and Engineering Specialties Limited, Montreal, Toronto, Winnipeg

Distributor Who Found Plants Glad To Turn Problems Over To Him Makes a 'Comeback,' Contributes to War Effort

TOM MILLOTT
Of St. Paul, whose story on these pages should be an inspiration to those who have initiative, and faith in themselves and in the refrigeration industry in which they have been trained.

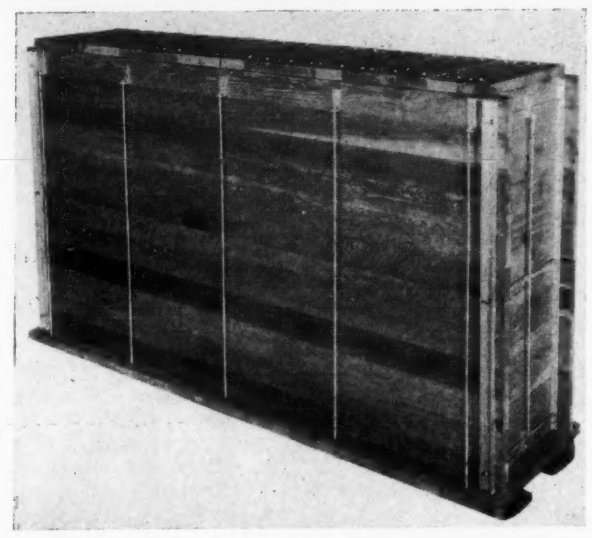
'Skill and Experience' Enable Firm to Improve or Speed Up Many War Jobs With Refrigeration

By A. T. (Tom) Millott, Conditioned-Air Equipment Co., St. Paul

Today the sons of soldiers who fought World War I are the warriors of World War II — strong young Americans just reaching the full flower of early manhood. We older men look back on the boyhood of today's soldiers and recall their growing pains, their heartaches, their mistakes and the tragic world in which they grew. So short a time does it seem that it is hard to realize that they are today the strong fighting men on which we bank so heavily and the molders of a new world in which we are to live.

Perspectively the period from babyhood to young manhood is a short period and from a standpoint of industry it is still shorter, yet the electric refrigeration industry as we know it today wasn't even conceived when these boys were born. Paralleling their growth it too has come of age and is taking its place as a husky fighting man beside our sons. A great industry hardly known in the last war today is now a giant on the side of the allies. Great factories built during these formative years are now turning out the marvelously ingenious weapons of war and the young men who built this industry using the skill, daring and enthusiasm which this fabulous industry demanded are meeting today's war problems with equal efficiency and original thinking.

Only a year ago we in the refrigeration industry felt the beginning of the great upheaval yet since that time with the flexibility of youth we have adjusted ourselves to a new order. It seems fitting that some comment be made at this time by a distributor of refrigeration products such as air conditioning and commercial refrigeration who has faced the same problems as all distributors and dealers even to the liquidation of his business and the starting anew in the belief that the individuals in such organizations face their problems and their philosophy of living alone without the support of war work and the demands for production which keep factories too busy to worry about the past or what will happen in the future.



Red cedar tank designed and built by Conditioned - Air Equipment Co. to replace brine tanks, which use critical materials. This is just one of the many ways in which this distributing firm has used ingenuity and initiative to meet new kinds of problems brought on by wartime conditions.

The distributor and dealer's fight for survival must of necessity be on his own initiative against all the strains of shortage both in materials and manpower yet he can and in many cases is filling a vital role in the war machine.

The distributors and dealers of the refrigeration industry are the front line fighting men of the industrial battle. In normal times they are the hardened veterans used to long hours and economic pressure. If they are successful they must be continually on their toes and fighting. In an industry as new as electric refrigeration they have not had time to relax and get soft, therefore they are surely an invaluable asset to their local community to help fight this war and to help mold the new world in which we are to live.

In war however there must of necessity be "expendables" as the "generals" (that is, the manufacturers) and their organizations withdraw to more essential positions, but speaking as an expendable the writer believes that there is still a job to do, a victory to be won and a new world to establish and the individual expended can either accept defeat or fight on using his own initiative.

What Can You Offer?

With the necessity of survival and the shortages of materials to sell which to distributor and dealer is weapons and ammunition, the expendable must take stock of his assets. He has the will to win, the personality and business experience to analyze his position and perhaps the engineering talent and design ability (also the leisure) to apply his thinking to specific problems particularly those related to the industrial war machine.

In analyzing his position in the community he will find that because of pressure on other production fronts most local plants are having difficult times to secure essential solutions to specific problems along the lines of distributor and dealer engineering and service experience.

These plants will be glad to turn such problems over to aggressive and willing individuals to solve rather than try with their busy personnel to solve them themselves and they will be most cooperative and not too tough on lack of previous experience if the proper originality, aggressiveness and goodwill are shown.

An example of such problems and their solution which our own organization has accomplished with no previous experience is typical:

Saving Time on Gages

Designed and built shock testing equipment for 37 m.m. armor piercing shot which has won wide approval and has received considerable publicity.

Designed the filtering equipment for the largest electric shovel ever built — for filtering the air which cools the almost irreplaceable electrical machinery (37,000 cu. ft. of air per minute involved).

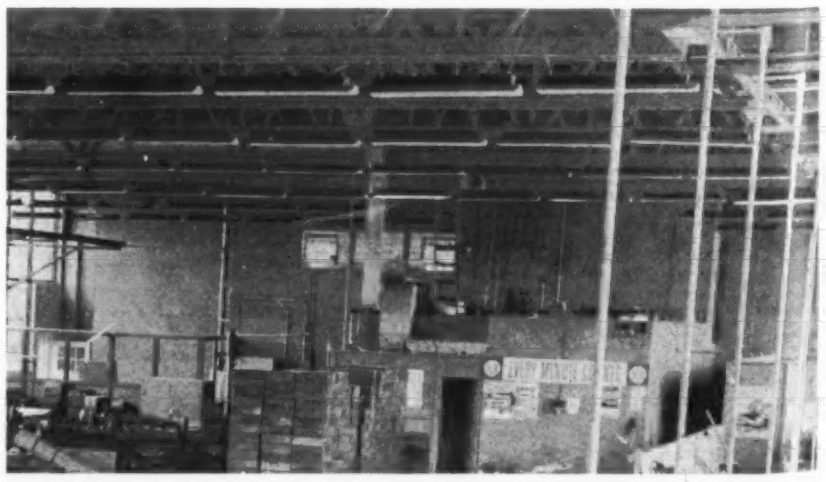
Designed and installed air conditioning in gauge rooms and then followed through to install low temperature (—120° F.) equipment for stabilizing and artificially aging the gauges. This process accomplishes in approximately 72 hours of treatments what formerly took from four to eight years by natural aging.

Again followed through with the tool engineers and by means of these

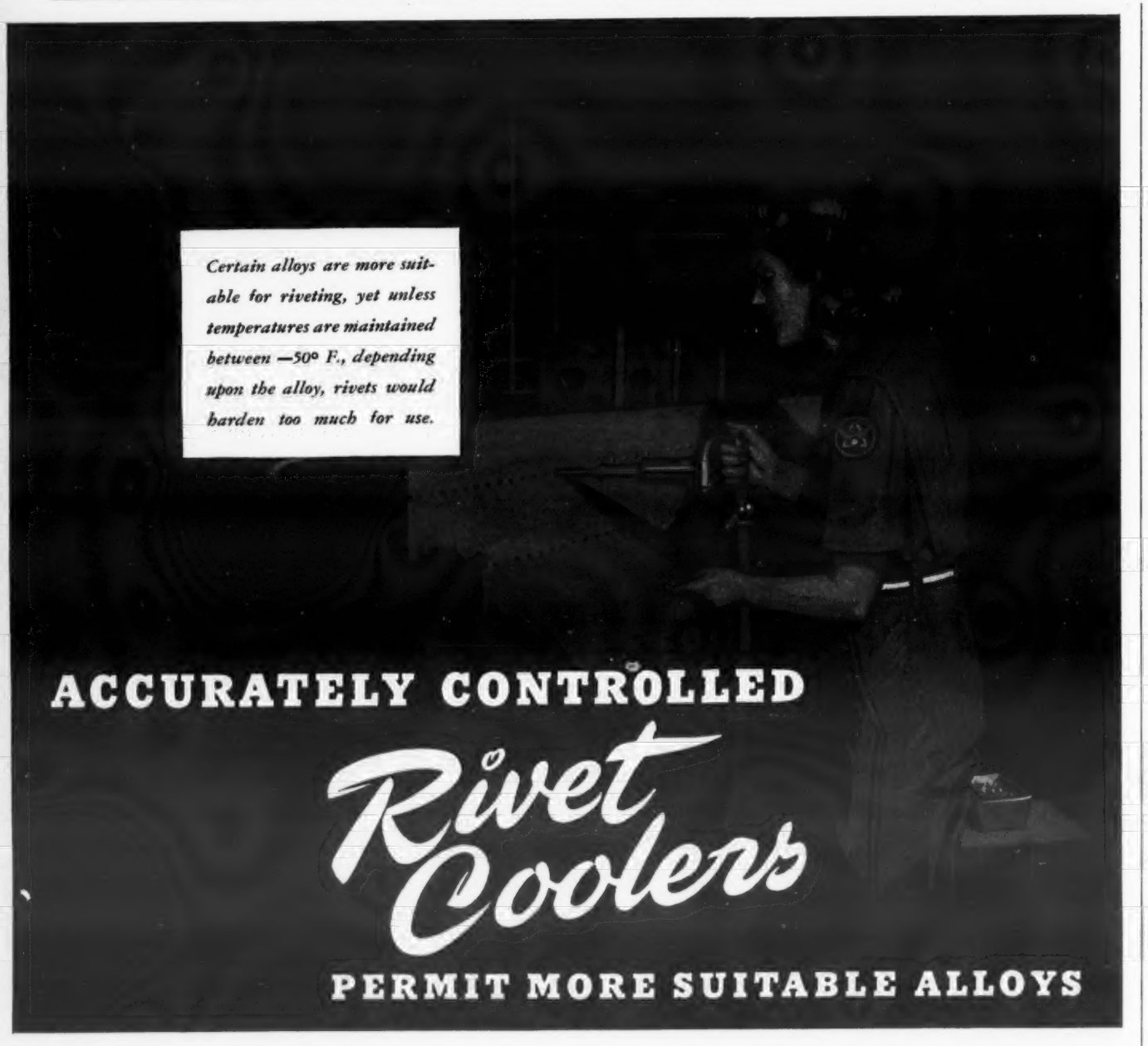
(Concluded on Page 5, Column 1)

Some Examples of the Type of Initative That Wins

Conditioned-Air Equipment Co. fitted up its own sheet metal shop, thereby permitting it to be sure of the satisfactory completion of many kinds of work that it once sub-contracted. The room in the rear contains most of the fabrication machinery and welding equipment. In many cases the equipment is moved right to the job and the fabrication done there.



As a space-saving device, the air conditioning equipment for the gauge room shown at the end of this war production plant is mounted on top of the room. This is indicative of the way in which the Conditioned-Air Equipment Co. is constantly mindful of the problems of its customers.


Certain alloys are more suitable for riveting, yet unless temperatures are maintained between —50° F., depending upon the alloy, rivets would harden too much for use.
ACCURATELY CONTROLLED
Rivet Coolers
PERMIT MORE SUITABLE ALLOYS

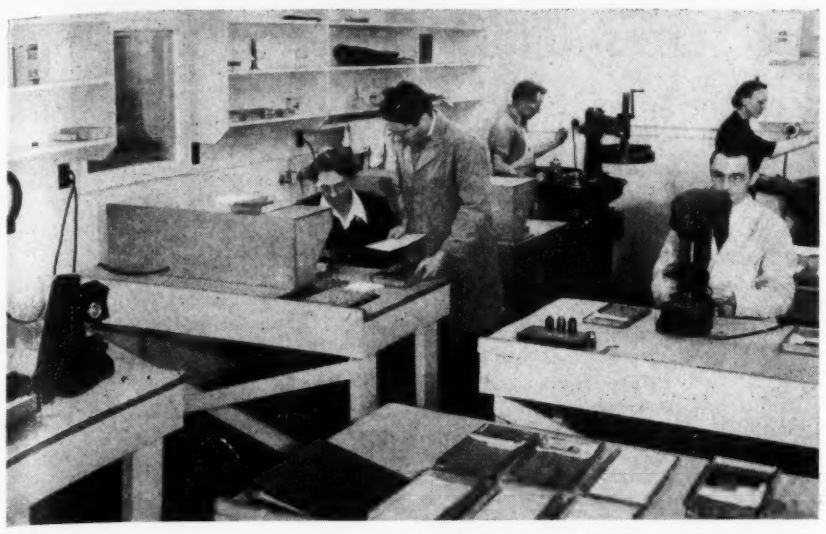
☆ ☆ ☆ ☆ A NEW WAR PRODUCTION MACHINE TOOL FOR

● PORTABLE RIVET COOLERS ● CONDITIONING TOOL AND DIE ROOMS ● COOLANT COOLING ● OPTICAL EQUIPMENT MANUFACTURING ● HEAT TREATMENT ● COOLING ELECTRODES FOR SPOT WELDERS ● MANY OTHER OPERATIONS

ACCURATELY controlled portable coolers permit use of alloys more suitable as rivets. This is another way in which accurately controlled refrigeration can increase the war production capacity of existing machinery. To perform its function with the most effectiveness, refrigeration, of course, must be accurately controlled. You can do this better with M-H Controls . . . Minneapolis-Honeywell Regulator Company, 2807 Fourth Avenue S., Minneapolis, Minn.

MINNEAPOLIS-HONEYWELL REFRIGERATION *Control* SYSTEMS
THE POLARTRON SYSTEM OF FROST-FREE REFRIGERATION

Gage Block Stabilizing - - One Application



Interior of one corner of a "constant temperature" gage room, in which final operations are performed. Humidity control is a principal factor in preventing corrosion of gages and instruments in such rooms.

This cabinet which has refrigeration furnished by a "cascade" type refrigeration system holds temperatures as low as —120° F., and is used in stabilizing gage blocks. To maintain the necessary accuracy during the life of blocks permanent stability must be achieved or warpage and growth over a period of time will destroy the accuracy.

• • •

'Take Responsibility' Of Solving Problems Of War Industries

(Continued from Page 4, Column 5)

low temperature's results developed a means of increasing the rockwell hardness 3 to 5 points higher than had previously been obtainable while at the same time giving uniform surface hardness by using a frozen slush quench in heat treatment. This increased surface hardness of course gave much longer wearability and gauge life.

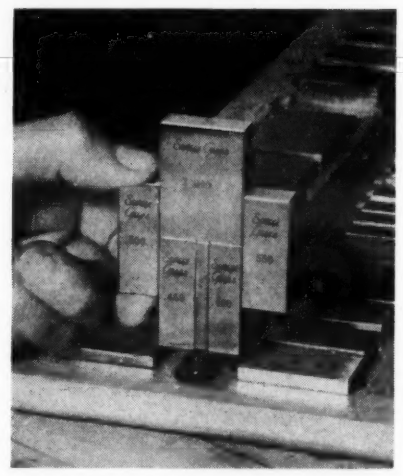
By observation and experience with such low temperature installations we found new applications for its use such as drawing the steel at much lower temperatures even using boiling water as the upper limit and sometimes going no higher than room temperature, but securing our thermal shock by chilling through room temperature to as low as —120° F. This of course maintains maximum hardness with equivalent or better distribution of stress.

Also based on this experience found that periodic treatments on tools, dies, gauges, broaches, straight edges, etc. and other essential high priced equipment for precision work would compensate for work fatigue and maintain essential hardness increasing tool life tremendously (some engineers predict several hundred per cent).

We are now working on a similar process for the stabilization of aluminum castings to eliminate growth after machining, this process to supplement the standard heat anneal which does not stabilize sufficiently.

We are also working on several other critical problems which to us seem even more essential than those above. We have secured most of our experience during the past year through the cordial cooperation of our peacetime customers and we find that being on the side lines with our minds free of production problems and attendant worries we are in a better position to serve such organizations than their own hard working personnel.

It is our procedure to take the problem (after seeking it out) draw up an idea (or several) for approval



Test for accuracy of three gage blocks from a 4 millionth set. If there is more than a 4 millionth difference between the three lower and the one upper block, two side blocks will not wring to combination.

and after a few revisions arriving at the final design utilizing as little of the firm personnel's time as possible but accepting the job finally only on a basis of cooperation and complete understanding so that we do not become too involved financially on a specific project in an experimental field.

We still have a small sheet metal shop from an air conditioning business and with this we have been doing high priority industrial work including everything from heavy duct work to tanks and even small ovens for vaporizing mercury. There is a large amount of such special work available where quick delivery is essential and although we don't pretend that our finished product compares with a factory job yet it serves its purpose and is on the job months ahead of average factory delivery. Moreover we are always on the job to correct any weaknesses if its performance isn't entirely satisfactory.

Visualizing a continued shortage of of steel and the necessity of converting to scrap any heavy gauge tanks that require repairs and replacement, we have designed and are now building in our sheetmetal shop red cedar tanks to replace brine tanks where priority assistance may not be given for steel replacement — such tanks replace as much as 5,000 pounds of steel with as little as a few hundred pounds of critical material.

I cite these specific examples believing that if other distributors and dealers are given the thought they will expand their vision to meet specific problems in their own community, and if they have not already done so take their place as valuable cogs in the war machine and with their usual initiative they will expand their horizon and lead rather than follow in the progressive industrial world of the future where initiative and vision will be fundamental requirements for survival.

This war with all the calamity and horror that the name implies is also a tempering process for humanity—a measuring rod of human endurance and courage of both mind and heart. To many the war will bring out qualities they believed they did not possess — a philosophy of life with depth and power based on knowledge, understanding and appreciation of their own abilities. Sacrifice, deep sincerity and consciousness of human duty will bring new character to make such individuals want to forget the selfishness, shallowness and competitive hatreds in which our generation was cultured.

It seems to the writer that we the expendables on the civilian front may contribute more than a little not only to the winning of the war but to formulating our philosophy and our faith in the future as a bulwark of character in which our sons and their friends may find comfort and renewed vigor after their return from a shot-torn and bloody foreign field. If we can give them strength, idealism, vision and hope on their return when we the expendables may not have won the war but history and our grandchildren will thank us for the peace.

Shock Testing Ordnance Materiel

Side view of shock testing equipment for 37 mm. and 20 mm. ordnance showing installation of Acme cooler, General Electric compressor, and gas boiler and circulating pump.

As life flows on this wound on civilized progress will heal, but the scars and crippling after effects may be felt for long years unless we who alone of all the world are far away from the disillusionment of shell fire and the bitter hatreds of personal slaughter find independence of thought, deep conviction of purpose and high ideals in which we sincerely believe with fanatical zeal. The boys who return from this war won't take surface words. They will demand sincerity and conviction from their fathers and a careful thought out philosophy in which they too can believe.

This is our job as individuals to think and work vigorously with originality and daring and so develop our minds, our faith and our philosophy as we would develop our muscles by repetition and a higher evaluation of our ability and character with each new and more satisfying accomplishment.

No factory leadership or government subsidy can help us in this—only the soul satisfying belief in our own ability and resourcefulness as individuals and a deep conviction in the kind of business leader we shall be in our local community will contribute to our peace of mind.

WE HAVE
THIS TO SAY ABOUT
PLASTICS
Nothing that an aluminum man can have to say about plastics can add to their virtues or subtract from their very genuine possibilities.
Actually, Alcoa welcomes the strides being made, technically and commercially, by this great and ingenious industry.
This is not mumbo-jumbo. It is a distinctly pious thought.
The more folks who get the big idea that the bright hope of industry, postwar, is to do new things new ways . . . the more designers who really get down to cases, the better for all of us. Imagineering is a nationwide must.
Plastics do many things better than any other material.
Alcoa Aluminum does many things better than any other material.
The two can team up to do a better job for you in certain situations than either could do alone.
As for Alcoa Aluminum, busy seven days a week on war production, we can only remind you that when our strong alloys are again available, you are going to have to throw your old measuring sticks into the scrap heap. New costs, new strengths, new technology, new finishes.
Of such things will postwar jobs be made. On such things must our "eighth-day" thinking be concentrated.
ALUMINUM COMPANY OF AMERICA, 2104 Gulf Building, Pittsburgh, Pennsylvania.
Alcoa Aluminum
IMAGINEERING
. . . and we have this to say about METALS

This advertisement by a leading light metals producer talks good, common sense.

OBVIOUSLY, plastics are not going to put metals out of business—as some Sunday feature writers would have you believe. Both groups of materials are cast for leading postwar roles in what we all hope will be a bright new world. Both have their own, unique advantages.

Plastics, for example, are marked by high resistance to chemical and atmospheric attack. They are light. They have excellent electrical insulating values and many desirable thermal properties. They offer a range of integral colors practically as wide as the spectrum, and many forms are transparent, translucent or opaque as the customer specifies. They can be molded into intricate shapes that require little, if any, finishing. They are warm and friendly materials to touch.

On the other hand, no molded plastics have yet been developed that equal metals for surface hardness, heat resistance, rigidity or structural strength per unit of area. Conventional molding methods require expensive molds and high heat and pressure limiting them to production of relatively small objects in relatively large quantities.

In short, there will be many a postwar job where metals will be a clear and obvious first choice.

There will be many other postwar jobs which logically call for plastics.

There will also be many occasions when plastics and metals will work together on the same job.

And there will be other times when a materials engineer will be hard put to make a choice.

Frankly, as one of the nation's largest producers of plastics, Monsanto would rather lose some of those close decisions than win a job which plastics could not handle. In the long run, one such misapplication can lose more business for plastics than losing a dozen close decisions. MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield, Massachusetts.

☆ ☆ ☆

MONSANTO PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

THE FAMILY OF SIX MONSANTO PLASTICS

(Trade names designate Monsanto's exclusive formulations of these basic plastic materials)

LUSTRON (polystyrene) • SAFLEX (vinyl acetal) • NITRON (cellulose nitrate) • OPALON (cast phenolic resin) • FIBESTOS (cellulose acetate) RESINOX (phenolic compounds)

Sheets • Rods • Molding Compounds Tubes • Castings • Vuepak Rigid Transparent Packaging Materials

OPA Issues Ruling on Dealer-To-Dealer Sales of Electrical Appliances

WASHINGTON, D. C.—An electrical appliance company seeking to establish a maximum wholesale price for radios sold and offered only at retail during March, 1942, should fix that wholesale price today by use of customary differential whenever possible, responsible OPA officials recently told an inquiring electrical appliance company in an interpretation to the General Maximum Price Regulation.

In its interpretation, OPA also explained how pricing by customary differential could be used in accommodation sales to other dealers.

Asking OPA for the correct method to use in determining a wholesale price for radios offered before only at retail, the appliance company explained that during March, 1942 certain other products had been sold to dealers (considered wholesale transactions) at cost plus a 10% mark-up.

OPA replied that the company could not set its present ceiling wholesale price for radios at cost plus a mark-up but must determine its wholesale ceilings on these radios by applying Section 2 of the General MPR. Preferred method in compliance with Section 2 was use of a customary differential.

IF THERE'S NO PRECEDENT

Specifically, OPA explained that if the company (1) made no delivery in March of these radios to other dealers and (2) had no offering price for such a delivery in March, but it (3) at that time had a customary differential (in percentage of cost used for mark-up) between sales at wholesale and sales at retail of other products, then it could now take the highest price charged the retail class of radio-buyers in March and adjust this price by the customary differential to determine the maximum price for wholesale sales of radios today.

"The seller does not necessarily have to have a specific differential which he has applied customarily to the commodity now being priced," OPA stressed.

It was pointed out again that dealer-to-dealer transactions, if bona fide, are considered to be sales at wholesale and that therefore, even if the March dealer-to-dealer transactions were not in radios they could be used to determine what the customary differential was in March, 1942 between sales at retail and sales at wholesale.

WHERE SALE HAD BEEN MADE

On the other hand, OPA added, "it should be kept in mind that if the same article had been delivered or offered for delivery to other dealers during March, the March dealer's price will establish the ceiling for subsequent wholesale sales irrespective of whether there is a customary differential."

Explaining how the customary differential would help determine present wholesale pprices of the radios, OPA said, "For example if the company customarily marked up its goods 10% on sales to other dealers and 15% on sales at retail during March then its customary differential between the two is 5% of cost."

This is the differential which the dealer would apply to the cost of his radios in determining the ceiling wholesale prices for those radios today.

EXAMPLE IS GIVEN

"It should be noted, however," emphasized OPA, "that the company cannot apply the differential to the cost of the present lot of radios but must apply the differential to the cost of that lot of radios which he sold in March, 1942.

"Assume that the radio which he sold a consumer in March cost him then $20.00," OPA suggested, "and he sold it in accordance with his mark-up policy at $23.00. On a sale to another dealer he would have sold it, under his policy, at $22.00, there being a differential of 5% of cost.

"Therefore," concluded OPA, "his maximum price today for sales of this radio to dealers is $22.00 and is not changed by the fact that he may have paid more than $20.00 for the new lot of the same radios which he actually plans to sell to dealers."

To qualify as a customary differential, OPA continued, the word "customary" requires "(1) that the differential before it may be used for pricing should have been established on something approaching a store-wide basis and (2) that the differential was uniform as to most commodities dealt in.

"Thus," added the interpretation, "if the company was engaged in dealer-to-dealer transactions during March in only one or two commodities out of a large number which it may have carried, its usual differential for these commodities cannot be used to price other commodities. The seller must have customarily dealt as both wholesaler and retailer, and not simply have had a usual differential in infrequent transactions or with respect to some commodities whose number is small as compared with the total number of different commodities which he sells.

DEALER-WHOLESALE STATUS

"Also it must be noted that even if the seller customarily deals as both wholesaler and retailer on a store-wide basis, his differentials for the two classes of purchasers may vary according to the commodity. Under these circumstances there is no customary differential which can be applied to determine the price of a commodity for which he has no specific customary differential."

When no customary differential can be established in compliance with such requirements, OPA stated that the company must then attempt to price by similarity and next by shopping competitors.

Use of customary differential in accommodation sales to other dealers was explained by OPA in answer to a second question: "How should a retailer establish his ceiling prices when, either for the purpose of closing out his business entirely or for the purpose of disposing of surplus stocks, he desires to sell to another retailer?"

"The sale of a business, including the stock in trade and intangible assets such as goodwill, is not subject to the Regulation," OPA answered.

It explained, however, that sales are subject to the Regulation if the retailer is selling part of his stock to another retailer for accommodation or in order to dispose of surplus stocks, and that in such circumstances ceiling prices would have to be determined under Sections 2 or 3 of the General MPR.

"If he made no sales of the commodity to another retailer in March, he might still determine his price under Section 2 (a) by the use of customary differentials, as discussed above," OPA suggested.

Former Graybar Manager Promoted In Africa

BIRMINGHAM, Ala.—Elmer G. Walker, former merchandise manager of Graybar Co. here who is now in North Africa with Gen. Jimmie Doolittle's forces, has been promoted to rank of major, his wife was notified recently. Maj. Walker received his commission as captain several months ago after completion of the Army Air Forces Officer Training Course at Miami Beach.

Iron & Steel Use In Coal Stoves Okayed

WASHINGTON, D. C. — In order to speed up conversions from oil to solid heating equipment and to take care of the normal demand for stoves, unrestricted use of iron and steel in the manufacture of coal and wood burning heating stoves will be permitted during February and March under the provisions of Supplementary Limitation Order L-23-d, as amended recently.

Any Class C producer engaged in the manufacture of domestic heating stoves fired with coal or wood may use iron and steel until March 31, 1943, without regard to the quota limitations previously established under L-23-d for the two months' period.

Seriousness of the fuel shortage, particularly in the Eastern seaboard, New England and North Central states, makes it advisable that coal or wood burning stoves be made available in large numbers so that conversions can be made quickly and necessary seasonal buying needs met.

An extension of the period during which iron and steel may be used by Class C manufacturers without restrictions was authorized at this time for the reason that the industry will require the longer interval to get into full production.

A similar action on Dec. 3, 1942, temporarily removed the iron and steel quota limitations for Class C producers during the interval until Jan. 31, 1943.

Alabama Dealer Seeks Used Models In Ads.

BIRMINGHAM, Ala. — Economy Auto Stores and Firestone Service Stores of this city are using display advertising in the newspapers announcing they will buy and pay cash for used electrical appliances including refrigerators, radios, toasters, fans, etc. At this time this is not a ruse to unearth trade-ins for new merchandise. The concerns really want to buy them, recondition and resell them.

Richmond League Elects Officers

RICHMOND, Va.—A. H. Herrmann has been elected president of the Electrical League of Richmond. Other officers for the coming year are: Vice president, L. L. Bond; secretary, A. B. Schad, and treasurer, W. W. Jones. The following standing committees have been appointed:

Program, Boyd A. Propert, John G. Kolbe, J. B. Dunn, J. L. Speights, John H. Pearson, J. H. Andrews and Edgar M. Andrews; membership, C. V. Pembleton, E. C. Eck and Walter C. Cottrell; business development, O. V. Sessoms, J. H. Stribling, J. H. Pearson, A. T. Hove and Edgar M. Andrews; publicity, Cecil Gray, H. L. Lamb and George Schermerhorn; finance, T. W. Wilmer, J. B. Dunn and C. F. Bennett; standards, Morris Hunter, J. L. Speights, J. B. Dunn, Marshall G. Fowlkes, A. T. Hove; interclub council, A. H. Herrmann, C. V. Pemberton; grievance, H. I. McConnell, W. B. Jennings, P. L. Morton.

Get On The
with HOTPOINT
BUILD BACKLOG OF POSTWAR BUYING POWER
PATRIOTIC ACCUMULATION PLAN
CONTRIBUTE TO POSTWAR PROSPERITY AND EMPLOYMENT
HELP WIN THE WAR
CREATE CONFIDENCE IN THE FUTURE
BUY BOMBERS TODAY —BUNGALOWS TOMORROW
THE BOND WAGON
A GREAT NEW WARTIME PROMOTION PROGRAM
THE SLOGAN "Buy War Bonds Today — Electric Kitchens Tomorrow" not only stimulates the sale of War Bonds, but creates confidence in the future that will build a backlog of post-war consumer demand. The purchase of bonds will also assure the funds with which people can buy the products of peace.
In Hotpoint's new plan book is described the entire program replete with the "Home Planning File," the year's great wartime promotional idea, direct mail, newspaper, etc. Plan now to "Get On the Bond Wagon." Help your government in the war effort today and help build up post-war prosperity and peacetime employment.
Buy War Bonds Today—
Electric Kitchens Tomorrow!

Girls Take Their Place As Mechanic and Parts Manager For Southern Distributor

The girl mechanic hired by the service department of Birmingham Electric Battery Co., electrical appliance distributing firm in Birmingham, Ala., looks over a job she has been doing on a "cold control." The name "grease gals" has been hung on such workers, but they are making a real contribution to the war effort by "carrying on" the maintenance of essential civilian equipment. The Birmingham concern is considering training more girls, and also uses a schoolboy part time.

Firm Employs Policy Of Bringing the Box To Its Repair Shop

BIRMINGHAM, Ala. — Girls are helping to carry on the refrigeration service department of Birmingham Electric Battery Co., Norge distributor for Alabama and west Florida.

This company established the service department several years ago, principally to serve its dealers, but as so many dealers went out of business with the freezing of new merchandise the service was extended also to the public.

Like other concerns in war areas the company was plagued with a shortage of manpower, so Wiley Stuart, manager of refrigeration service, decided to try out woman power. He hired a couple of girls, one in charge of parts and the other on actual repair work. He has found them very efficient at the job; in fact he states the lady parts manager is better than the man she replaced in keeping up with the various parts required to operate the department.

Now that a refrigeration service school for women is to be held in Birmingham, sponsored by dealers and the Birmingham Electric Co., Mr. Stuart is very much interested in it and may hire some more of the "grease gals," as somebody called them. One of his girls will take the course.

BRING 'EM BACK WHOLE

Right now Mr. Stuart has one veteran service man left with him, and in addition he also uses the services of a school boy who takes vocational education and works after school hours. That makes up his staff for handling a heavy volume of repairs.

"We have had to streamline our refrigeration service in line with the times and the shortage of help," explained Mr. Stuart. "Our policy is as far as possible to bring the refrigerator to the shop for repairs. This enables us to carry on several jobs at once with supervision. This makes the job cost the consumer more, as we charge $5 for bringing in and taking back the refrigerator. But that is the only way we can handle any volume of business, as otherwise our service force would be spending too much time going back and forth to jobs. Here on the floor a mechanic jumps immediately from one job to the other.

"Of course the consumer raises the point as to what she will do without a refrigerator while her box is being repaired. We tell her she will just have to do without, get an ice box, or use the back porch. We of course try to get the box back as soon as possible, and we have one or two to loan in an emergency.

"Our truck driver and assistant have had much experience handling boxes, and use a slip cover over the refrigerator, to guard against damage.

ONE LINE ONLY SERVICED

"We also confine our service to Norge refrigerators exclusively. That is the line we sold and it gives us all the work we can do and more besides. We have calls on other makes, but have to turn it down for want of facilities to handle."

This concern, as established distributors of Bendix washing machines, has the service on them also, in fact gets about all the repairs in its territory. Repairs on other major appliances are also handled, but the specialty is refrigerators.

Feminine Neatness In Parts Managing

This young lady who is parts manager for the Birmingham Electric Battery Co. has done "the best job of anyone ever hired in that capacity," say company officials.

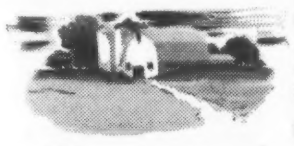
BOND WAGON in 1943

Last Year's Outstanding Wartime Advertising Theme To Be Greatly Expanded in 1943

NATIONAL ADVERTISING

Hotpoint's wartime advertising program launched in national magazines during 1942 was enthusiastically received by utility companies, large retailers, official Washington. Hotpoint will not only continue the program but will expand it in 1943 with four-color advertisements in *Life, Collier's, Ladies' Home Journal, American Home, Better Homes & Gardens, House Beautiful* and *Bride's Magazine*—PLUS...

NEW FARM ADVERTISING



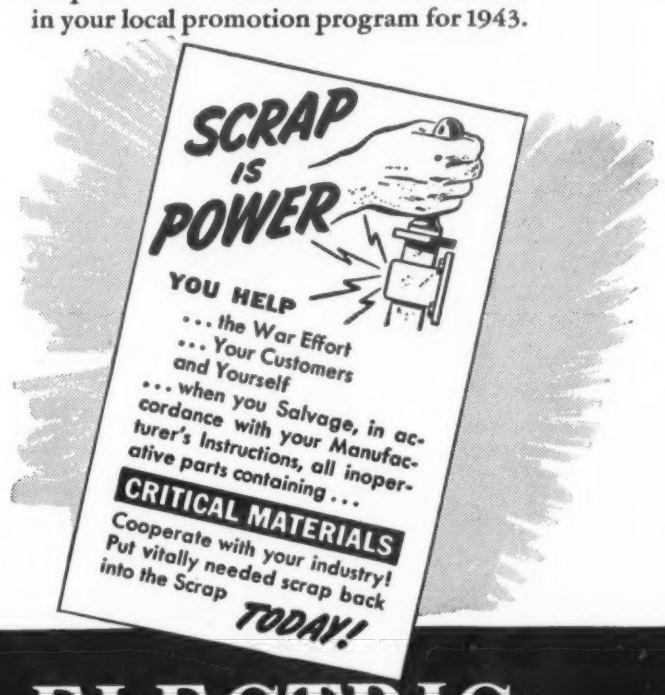
Special color pages in *Country Gentleman* and *Farm Journal*, America's two leading farm papers, will be used in 1943 to help support the government's War Bond Program for farmers, and help build a post-war farm market for Hotpoint Electric Kitchens. *Electricity on the Farm* will also carry regular pages. End of war will find American farmers prosperous buyers and excellent prospects for modern electrical equipment.

LOCAL ADVERTISING PLANS

Here is a program you can use now—for your spring activity. The 1943 Plan Book tells how you can use Hotpoint's War Bond advertising theme in your own newspaper advertising, and in customer contacts. Plan now to include the BOND WAGON PROGRAM in your 1943 promotional activities. See your Hotpoint distributor or factory representative. Edison General Electric Appliance Co., Inc., 5632 West Taylor St., Chicago, Ill.

HOME PLANNING FILE

Vastly successful in local promotions during 1942, Hotpoint's novel Home Planning File offers more opportunity than ever. Hotpoint national advertisements will feature this handy file for keeping clippings and ideas of the homes your customers plan to build after the war. Include this in your local promotion program for 1943.


SCRAP IS POWER
YOU HELP
... the War Effort
... Your Customers and Yourself
... when you Salvage, in accordance with your Manufacturer's Instructions, all inoperative parts containing ...
CRITICAL MATERIALS
Cooperate with your industry! Put vitally needed scrap back into the Scrap
TODAY!

Hotpoint ELECTRIC KITCHENS

CLOTHES DRYERS · AUTOMATIC DISHWASHERS · ELECTRASINK · STEEL CABINETS
REFRIGERATORS · RANGES · WATER HEATERS · WASHERS AND IRONERS

N.Y. Electrical Assn. Elects 1943 Officers

NEW YORK CITY — James W. Carpenter, vice president of Long Island Lighting Co., was re-elected president of the Electrical and Gas Association of N. Y., Inc. at the group's annual meeting here Jan. 20.

Other officers elected were first vice president, S. J. O'Brien, president of S. J. O'Brien Sales Corp.; second vice president, T. F. Barton, vice president of General Electric Co.; third vice president, T. H. Joseph, president E J Electric Installation Co.; and fourth vice president, Norman L. Myers, eastern manager of Electric Appliance division of Westinghouse Electric & Mfg. Co.

H. C. Calahan, district manager of General Electric Supply Corp., was elected treasurer; James A. Sackett, sales manager of Kings County Lighting Co., was elected secretary; and C. A. Norton, sales manager of Pierce Laboratory, Inc., was made assistant secretary.

In his annual association report, Mr. Carpenter declared that it was time for the industry to give its best thinking to pastwar planning.

"Toward that end . . . I believe the association should direct its activities in the coming year," he said.

Mr. Carpenter also has been elected president of the National Electrical, Radio & Television Exposition, Inc., a subsidiary of the Electrical and Gas Assn.

Mr. O'Brien was named vice president of this organization, and Ralph Neumuller was elected secretary and treasurer.

Air Conditioning & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office;
Established 1926 and registered as
Electric Refrigeration News

F. M. COCKRELL, *Founder*

Published Every Monday by
BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit, Mich.
Telephone Columbia 4242

Subscription Rates
U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $4.00 per year; 2 years for $7.00. All other foreign countries: $6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

GEORGE F. TAUBENECK,
Editor and Publisher

PHIL B. REDEKER, *Managing Editor*
Editorial Assistants: CAROLINE TUNSTALL, BARBARA BELCHER, and ELISE WHITE.

JAMES B. SMITH, *Advertising Manager*
MARGARET MARR, *Assistant Adv. Mgr.*
ELIZABETH SMITH, *Assistant Bus. Mgr.*
HELEN C. HENDERSON, *Credit Manager*
ELIZABETH K. JEHN, *Subscription Mgr.*

On leave of absence to serve our country
U. S. Army: RICHARD A. NEUMANN, JACK SWEET, GEORGE L. COLLINS, GEORGE M. HANNING, ALVIN E. HORNKE, HUGH T. MAHAR & HARVEY HARTWIG.
U. S. Navy: ROBERT P. NIXON, ED HENDERSON, JOHN R. ADAMS.
U. S. Marine Corps: PAUL R. PARK.
U. S. Army Air Forces: JIM MCCALLUM.

Member, Audit Bureau of Circulations
Member, Associated Business Papers

VOLUME 38, NO. 9, SERIAL NO. 728
MARCH 1, 1943
Copyright, 1943, Business News Publishing Co.

Refrigeration Will Help Win the War

Easy Money

ABSENTEEISM, which has nearly everybody so worried and upset, is no wartime phenomenon to refrigeration manufacturers. They ran into big doses of it back in 1940, and they know the major cause of it.

What is that major cause? Answer: time-and-a-half for overtime. Or, put another way, "easy money."

Back in the summer of 1940 some refrigerator manufacturers were crying their eyes out because their production couldn't keep up with orders.

The new Wages-and-Hours law forced them to pay time-and-a-half for all work in excess of 40 hours a week, but even though their costs were raised thereby, they were anxious for their men to work 48-hour and 52-hour weeks. They wanted to fill those orders. They wanted to get their distributors off their necks, and away from the long-distance telephones.

But strangely, even with long workweeks they couldn't get the stuff out. Men would work Saturdays and Sundays one week to get their time-and-a-half and double-time (for Sundays), then lay off most of the next week!

"We've got to have some time to spend all this money," one man answered when upbraided by his foreman.

"Monday morning sickness," common disease now, was then spreading through the refrigerator manufacturing establishments. Now it has infected virtually all working forces.

There is the story of the southern war plant which requested deferment for a notoriously lazy negro as "essential to the war effort."

"But he isn't even employed," protested the scandalized draft board.

"We know," replied the plant personnel manager, "but Rafe is the best crap-shooter in these here parts. Every Saturday night he cleans our boys, and Monday morning they have to come to work again. If you draft him, we'll never be able to keep them on the job."

This reaction to "easy money" is not confined to the ranks of union labor. It seems to affect all humans. The late John Patterson, who made so much mercantile history at National Cash Register, used to like extravagant wives, because they kept their husband's noses on the grindstone.

In fact, Patterson encouraged extravagant habits among the wives of his high-priced executives. If they didn't seem to know how to spend money, Patterson would send them off on junkets to New York and Paris, and they soon caught on.

Man was meant to work hard. When he doesn't have to work hard, he generally gets into trouble. The "easy money" of the high-flying Twenties got business and business men into troubles from which they are just now emerging.

And the "easy money" of the Forties is liable to trip up the aspirations of union labor, as well. It could even trip up the military campaigning of American armed forces!

Our real troubles in this connection may only be starting, to wit: Further inflation is inevitable. This will bring demands for higher wage rates. Higher wages, to the men in the shop, mean only one thing—a higher standard of living.

Yet it's obvious that during war our living standards can only go *down,* because the supply of goods which civilians can buy must continue to diminish. Hence, wage raises will not mean living standard raises. Frustrated, labor may absentee itself right into some sort of compulsory-work straightjacket. And in the process, it will have alienated whatever favorable public opinion it may have retained up until now.

For its predicament, labor can then blame the timid politicians who have been afraid to tell the unions the economic facts of life.

And they can also blame their union leaders who, to justify their own high salaries and the fat "take" in dues, have continued to press for more and more of that "easy money" even though they should have known that in so doing they were perpetrating a cruel deception on their uninformed minions.

The sorry spectacle of a policy which smirkingly passes out wage increases with one hand while grasping desperately with the other hand to recapture that extra money in the form of new taxes is the spectacle of a political junto agonizingly impaled on the hooks of its own dilemma.

They'll Do It Every Time

By Jimmy Hatlo

GU-GU-GOOD MORNING, CHIEF- SORRY TO BE LATE, BUT THE BABY WAS TEETHING AGAIN POOR LITTLE TYKE, I WAS UP ALL NIGHT WITH HIM..
WHAT IS HE RAISING- A BABY OR A CROCODILE? IT'S BEEN TEETHING FOR THE LAST TWO YEARS!
I SUPPOSE HE PUT ON THAT RENTED TUXEDO JUST TO GIVE THE KID A LAUGH-
BABY'S TEETH, HUH? THAT NIGHT OWL IS JUST HANGING ON HERE BY THE SKIN OF HIS OWN MOLARS!
OH, DADDY! AN EYE FOR AN EYE AND A TOOT FOR A TOOTH.
THE BABY'S NAME IS "ALVIN," BUT HE SHOULD HAVE CALLED IT "ALIBI."
THANX TO HORACE SEAMAN, SAN FRANCISCO.
JIMMY HATLO
Copr 1943 King Features Syndicate Inc World rights reserved
2-9

LETTERS

SERVICE BILLS

Landis Electric Co.
121 N. Duke St.
Lancaster, Pa.

Editor:

Can't help commenting on your Jan. 18 issue. The "Who's Wasting Materials—" article is very timely and am glad to see that you have put it right up front with a "bang." I have been hoping that you would use this front page to plug something that needs plugging by going all out on prominence and size. No doubt many of your readers feel like I do, namely that we need such a publication as yours to fight some of our battles and that these battles can't be fought in the back lines. Let's have some moer good front page plugs.

Incidentally I am wondering whether other dealers are finding a certain public resentment against what the public believe to be, using the emergency for high service bills. The high food bills, etc., seem to be working up this suspicion of prices. These customers don't kick as much as they used to about service bills but you can sense a quiet sort of resentment in their actions.

We have noticed this for some time and finally decided to do something about it. The following stamp has helped us a good deal. It has the effect of beating them to the draw and changed any discussion of price to a rather sympathetic discussion of the problem of keeping men on service. If it will help any other dealer you are welcome to publish it.

You may be interested in knowing that while we have found it advisable to discontinue some trade publications for the duration, we have never given a moment's thought to depriving ourselves of REFRIGERATION NEWS.

Harry H. Landis, Jr., President

* * *

WE WANT YOU TO KNOW

That—Labor on this bill is figured at....per hour.

That—We lost half of our service organization to defense industry.

That—We were forced to increase wages to our remaining service men.

That—OPA has granted us this....cents per hour increase under docket No.....

That—We encourage you to make all minor repairs yourself.

AUSTRALIAN NEWS

F. C. Lovelock, Pty., Ltd.
16-20 Young St.
Sydney, Australia

Editor:

I was very pleased indeed to receive your letter. It took a long time to get here but that, of course, is understandable these days.

Incidentally, George, the news has been much brighter during the past couple of weeks, and if we can believe all we hear and most of the stuff we imagine, it looks as if the United Nations are just about ready to *attack,* and that we shall all soon be forgetting that sometime in the past our leaders were saying "too little, to late."

You ask is refrigeration playing a role in armament production in Australia as it is over there. I would say "Yes," the major portion of all our refrigeration and air conditioning factories have been turned over entirely to war production and I suppose I would be right in saying that at least 90% of that major portion is engaged in direct munition making and arms manufacture. The Defense Services, both Australian and American, have been drawing very heavily on refrigeration and air conditioning equipment, and we here at Lovelocks are being very hard put to it to supply the demands for parts and accessories.

Most of the industries in this country, as in yours, are operating under general priorities, and from the enclosed copy you will be interested to see that Refrigerant Gases are specified under special priorities. You will note that the usage of "Freon" is very restricted, methyl chloride is a little easier, and as from 25th ult. sulphur dioxide is very wide. Up to the 25th August sulphur dioxide had the same rating as methyl chloride, viz. 1, 2, 3, 4, but as there were fairly good supplies already here in Australia, and the fact that it is expected that the local production of SO_2 will commence next month, it was decided to extend the ratings as regards this particular refrigerant.

Frank Hansen, General Manager

* * *

Refrigerant Gases (Other than Ammonia)

The Priorities for the release, use, and/or disposal of refrigerant gases (other than ammonia) are:

1. Allied naval requirements.
2. Hospital blood banks and other similar hospital use (this does not include refrigeration equipment for the storage of food in hospitals); air conditioning in munitions factories and annexes; air conditioning in hospital operating theaters and X-ray plants; air conditioning in R.A.A.F. control stations; air conditioning in gauge rooms such as the National Standards Laboratories.
3. Defense and hospitals, ships' refrigerators, other than covered by 1 and 2 (see footnote regarding ships' refrigerators).
4. Dairies, butchers' shops, fish shops, ham and beef shops, small goods shops (other than for display purposes), licensed milk shops.
5. Other establishments where refrigeration is essential for the preservation of necessary food supplies to the public.
6. Ice cream cabinets and domestic refrigerators.
7. Beverage coolers, bottle cooling, drinking water coolers, soda fountains and hotel bar equipment.
8. Bakers' chilled water equipment.
9. Glass display cabinets and windows, used for display purposes only.

The ratings for individual refrigerants at the above date are:

Freon—1 and 2.
Methyl Chloride—1, 2, 3 and 4.
Sulphur Dioxide—1, 2, 3, 4, 5, 6, 7, and 8.

Each order on suppliers must show:

(a) Model, make and horsepower of unit to be serviced, and location of same.
(b) Type of evaporator, i.e., flooded, dry expansion, cross finned, or F.D.C. coil.
(c) Present stocks.
(d) A declaration as to the purpose for which the equipment to be serviced is used and the information furnished in the order is correct.

The Priorities Quiz

(Air Conditioning & Refrigeration News, with the aid of a man who is actually engaged in handling much priorities work, will attempt to answer questions from readers about priorities problems. The editors will not guarantee to answer all questions, nor can they guarantee that the answers will be legally perfect, but an effort will be made to provide a guide to correct procedure wherever possible.)

Purchase Orders In The CMP 'Waiting Period'

Q. Has there been any official announcement of how manufacturers are to place purchase orders in the interim period between the filing of CMP applications and the actual issuance of allotments?

A. Yes. Priorities Regulation No. 11-a has been issued and it provides that manufacturers who operated under PRP during the first quarter of 1943 may apply the ratings assigned to them to the delivery of not more than 40% during April nor 70% during the entire second quarter of the total amount of each listed material which was authorized for the first quarter. The authorized quantity to which the percentages are applied includes both the quantities allotted on the PD-25-a and in addition thereto any quantities authorized on PD-25-f interims approved before March 1. As CMP allotments are received, the quantities placed under this interim procedure must be deducted from the total CMP allotment so that there will be no duplication.

If the total CMP allotment is less than the 70% placed under this interim authorization those orders so placed must be correspondingly reduced. This applies only to production requirements. It does not apply to material required as maintenance, repair or operating supplies for the manufacturer's plant. Orders for maintenance, repair and operating supplies may be placed with the same ratings authorized on first quarter PRP certificates to the same extent that such supplies were received during the first quarter. This procedure may be followed until the third business day after the issuance of CMP regulation No. 5 which will thereafter control the manner in which maintenance, repair and operating supplies may be purchased.

Simplification Coming In Materials Plan?

Q. There have been a great many announcements made recently stating that the CMP is in the process of simplification. Has any actual revision been made and has it resulted in actual saving in the amount of paper work required?

A. Yes. The most important simplification announced to date has been the withdrawal of Form CMP-6. This form was designed to be attached to every purchase order for controlled materials in the form furnished by the mills. CMP-6 was almost identical in substance with old PD-175 which was formerly attached to all orders on brass mills but which fell of its own weight because of the fact that it merely complicated ordering materials without any advantage. End use certifications took its place and will, undoubtedly, take the place of CMP-6.

CMP Regulations From No. 1 To No. 7

Q. There have been so many regulations issued and so many revisions of those regulations since CMP was announced that I find I am confused as to just what regulations have been issued under CMP and how they affect my business. Can you tell me briefly just what regulations are now in effect as of this moment?

A. CMP probably will be confusing to everyone while it is in the formative stage. By July 1, however, everyone should know pretty well where they fit under the plan. At the present moment, the following regulations are in effect:

CMP Regulation 1—(Revised Feb. 8)—Defines the rights and the obligations of consumers—sets up allotment procedure—establishes rules for controlled materials producers.

CMP Regulation 2—Sets up inventory regulations including scheduling of deliveries and redistribution of excess inventories.

CMP Regulation 3—Defines status of preference ratings and their relationship to allotment numbers—provides new certification to be placed on all orders under CMP.

CMP Regulation 4—Sets up regulations covering deliveries of steel, copper and aluminum from warehouse stocks.

CMP Regulation 5—(Issued Feb. 9, now in process of revision)—Defines maintenance, repair and operating supplies and sets up provisions for their procurement.

CMP Regulation 6—(In process of issuance) will cover regulations for materials to be used in construction and facilities.

CMP Regulation 7—(In process of issuance) Will cover regulations affecting distributors.

Placing Orders For Last Half of '43

Q. I see the WPB is again notifying everyone that orders for "critical components" required for the last half of 1943 must be placed by March 1. How can I place such orders for delivery in December, 1943, when I do not even have authorization to place orders for delivery of such material in May and June of this year?

A. This notification you mention is a part of a new program now in development which will be known as the "Controlled Components Plan." WPB intends setting up very complete schedules as to the production of several hundred "bottle neck items" which they call "critical components." They realize that more valves, for example, are required this year than can be possibly produced with the existing facilities and raw materials available. The purpose of the plan, therefore, would be to make sure that requirements most essential to the war effort are filled first. Priorities haven't done it, so a large overall scheduling program will be adopted for such items.

By placing your orders before March 1 for these requirements, you will indicate to the manufacturer what his production requirements are likely to be and enable him to more accurately file his applications for controlled materials. This will in turn permit the WPB to see a more accurate picture of the demand and the supply and to set up schedules accordingly.

The orders you place will be in the nature of "blanket orders." They will not be "delivery orders"—your supplier cannot make delivery against those orders until you have furnished him a release properly certified indicating that your authority to receive such material has been granted you by the WPB. Orders so placed will be "informative" only.

How Copper Tubing Is Obtained Under CMP

Q. Will the new warehouse regulation under CMP permit a serviceman to buy copper tubing without an allotment number?

A. This is covered by CMP Regulation 4 which says that a warehouse may fill an order for copper tubing without an allotment number if it bears a preference rating of AA-5 or higher and if the order does not require delivery of more than 500 pounds at any one time to any one destination and if the order is certified as follows:

"The undersigned hereby certifies to the warehouse with whom this order is placed and to the War Production Board, subject to the criminal penalties provided in section 35 (A) of the United States Criminal Code, that the amount of each item of brass mill or wire mill products covered by this order, together with all other amounts of such item received by, or on order for delivery to the undersigned, at any one destination from warehouse stock, during the same month, does not exceed 2,000 pounds, and that such items will not be used by the undersigned for any purpose in violation of any order of the War Production Board."

Restrictions on Metals Use For Plumbing Fixtures Relaxed

WASHINGTON, D. C.—Three relaxations in restrictions on use of metals in plumbing fixtures were announced Feb. 20 by the WPB. They are covered in Schedule XII to Limitation Order L-42, as amended.

The first change eliminates "trap standard" from the definition of "plumbing fixture," thus leaving the product to be manufactured as has been customary in the past.

The second permits the use of a maximum of one pound of ferrous metal for spuds. This change is designed to prevent a critical shortage of water closet combinations. The actual metallic weight of spuds was considered unimportant in comparison with the disadvantages of eliminating their use.

The third change increases the limits on weight of metal in component parts of tanks for urinals, heretofore restricted to four pounds. The original provision failed to take into account the fact that batteries of urinals sometimes use a common tank and that in such cases component parts require more metal.

"DAY & NIGHT"
A Complete line of Storage Type Water Coolers in accordance with Latest W. P. B. Regulations
DRINKING FOUNTAINS
NAVY-2 Models for Shipboard use
ARMY-NAVY-2 Models for land use
CAFETERIA TYPE COOLERS
ARMY-NAVY 2 Models for Mess Halls
INSULATED STORAGE TANK TYPES
6 Models for Bakery Service • 3 Models for Film Processing •
WRITE FOR LATEST DATA
DAY NIGHT COOLER DIVISION
DAY & NIGHT MFG. CO.
MONROVIA • CALIFORNIA
FACTORY REPRESENTATIVES
NEW YORK — A.C. Homeyer, 682 Bdwy. • Marc Shantz, 565 Wash. Blvd.
CHICAGO
ST. LOUIS — R.H. Spangler, 3331 Market St. • I.E. Parker, 228 2nd St.
DECATUR, GA.

NOW! METHYL CHLORIDE AVAILABLE

IMPORTANT
Don't let idle cylinders hold up supplies now available. Look through your stocks and warehouses for any empty cylinders, or cylinders which can be emptied . . . AND RETURN THEM PROMPTLY.

WE expect to be able to supply the current requirements of the refrigeration industry for Methyl Chloride, subject to the regulations of the War Production Board. Order what you need but please do not stock up unnecessarily. Electrochemicals Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware.

DUPONT
METHYL CHLORIDE
Better Things FOR Better Living . . . THROUGH CHEMISTRY

COOPERATION WINS THE WAR

WOLVERINE SALUTES
MEMBERS OF S.R.C.A.

The important position to which the Standard Refrigeration Compressor Association has risen as a constructive factor in the refrigeration industry in less than two years' existence is a remarkable achievement.

Comprising a group of major manufacturers of condensing units, whose activities are focused in the field of commercial refrigeration and air conditioning, the S.R.C.A. is today pledged to extend the fullest cooperation in furtherance of the war effort.

Its members are making vital contributions to this effort; they are supplying condensing units to all branches of the Armed Forces for essential industrial uses in war production and for indispensable civilian applications.

The myriad new developments in which its members have participated cover a wide range of activities, from the production and preservation of blood plasma to the operation of aircraft stratosphere testing chambers operating as low as 110 degrees below zero. The products of S.R.C.A. members help to "keep them flying."

We of Wolverine salute you, S.R.C.A. from right alongside, traveling in the same direction—having in mind the same purpose—to win the war—doing our part by furnishing copper tube that is now controlled from ore to finished product.

E. A. TERHUNE, Chairman
Standard Refrigeration Compressor Association

CALUMET AND HECLA CONSOLIDATED COPPER COMPANY
WOLVERINE TUBE DIVISION
Seamless Copper — Brass
1411 CENTRAL AVENUE — DETROIT, MICHIGAN

What's New

Descriptions of some of the brand new items for the refrigeration and air conditioning, and major appliance fields.

Coatings To Combat Condensation Drip

KANKAKEE, Ill. — Use of "No-Drip" plastic cork coating to treat condensation drip is explained in a new 32-page handbook published here by the J. W. Mortell Co., manufacturers of NoDrip and other technical coatings.

Information in the handbook includes listing of metal, wood, and composition surfaces that NoDrip will protect; complete instructions for applying the coating by hand, brush, trowel, or spray; charts on humidity, pipe coverage, and tank requirements; and endorsements of the product.

Effectiveness of the coating in conserving refrigeration and horsepower, and its use in cold air conditioning ducts are among applications of the product discussed in the book.

'Drier-Outer' For Use By Home-Owners

ATLANTA, Ga. — A new service item possibly suitable for merchandising by refrigeration dealers has been announced by the Puritan Chemical Co. here.

Called "Drier-Outer," the product is designed to absorb moisture from air in confined spaces by means of dehydrating chemicals that are harmless to the touch or to fabrics. It can be used to prevent mildew, mold odor, and damp rust from developing among stored-up linens, luggage, tools, food., etc.

Puritan's Drier-Outer comes in two retail sizes, a four-by-four-inch square for closet space at 69 cents, and a larger size made for basement use at two dollars. It is also produced in two forms, a pleasantly scented white block and a gray block with odor-absorbing properties. Both are made of non-critical materials and packaged so that no curtailment in manufacturing is expected.

Normal life of each Drier-Outer is 30 days.

Electrode Holder Has Detachable Stinger

DETROIT—"Quik-Trik," a new insulated welding electrode holder with detachable "stinger," has been introduced recently by the Jackson Products to speed production welding.

The female section of the cable connector is permanently soldered to the cable lead and remains in the insulated handle. The detachable jaw section — the "stinger" — is snapped into the female section by a quick twist of the operator's wrist and is ready for business. The actuating cam mechanism that locks male and female sections together is said to be positive and may be quickly disengaged.

The manufacturers claim that the use of this holder eliminates waste of time in changing cable connections and does away with dangerous loose cable ends kicking about when the "stinger" end is detached.

When necessary, the handle and the cable may be pulled through a small hole and the "stinger" then connected, saving time and cable extensions. Each welder is responsible for his own holder. Disconnecting the "stinger" at the end of a shift, he may turn it in for inspection and servicing, thus extending holder life. This new holder is made in three models, all insulated.

New Odor Absorber For Refrigerators

CHICAGO—Nox-Odor, a new, non-chemical material with neutral and harmless properties has been developed by Tamms Silca Co. which, when placed in a refrigerator, ice box, or food storage room, absorbs odors, according to the company.

Protects butter or other foods that have a tendency to take on the odor of melon, onion, bananas, etc., stored in the same cooling unit. All that is necessary to do in using is to open vents at top and bottom of container and place in refrigerator. When used in the refrigerator it should be removed every 10 days or when defrosting so that it can dry out.

This compound may be used to absorb fumes in freshly painted bed rooms, for eliminating kitchen odors, etc. Nox-Odor comes in two sizes—No. 1, vent style package for shelf use and No. 2, large mesh bad suitable for hanging in meat coolers and large commercial refrigerators or food storage rooms.

Anti-Corrosion Agent For Use In Water Lines

EVERETT, Mass.—A new type anti-rust, anti-corrosion agent already tested in water lines and steam applications is offered here by the Cannon Chemical Co., Inc. as a means of cutting corrosion problems and lowering maintenance costs and parts replacements.

Named "Rustbuster No. 3," the new product is said to give internal surfaces much the same protection from oxidation that paint and similar materials give to exteriors.

In steam systems, Cannon Chemical reports that Rustbuster No. 3 serves as rustproofing agent throughout the entire system in addition to counteracting rust and resulting corrosion in the boiler and boiler water.

Chilled water lines, condensate pipes connecting with cooling towers or evaporative condensers, and spray chambers in air conditioning water lines are other installations in which the chemical can be successfully used.

Wood Link Matting Is Rubber Substitute

TOLEDO, Ohio — A new flexible wood link matting has been developed here by American Mat Corp. as a substitute for matting made of now-scarce rubber and other critical materials.

Constructed of natural wood links, the new product is light in weight, can be rolled or folded for easy handling and cleaning, and follows floor contour when laid.

The matting is said to be comfortable to stand on, to offer good drainage, and to provide underfoot safety. Moreover, ends are beveled to reduce danger of tripping.

American Mat recommends the product as particularly suitable for use in factories, around machinery, on oily and greasy floors, in kitchens and laundry rooms, and behind counters.

Flexible wood link matting is one inch thick and comes in stock sizes 18 by 32 inches, 24 by 38 inches, and 30 by 44 inches. It also can be obtained in special sizes of any length and up to 36 inch width.

The corporation also announces that a special service and advisory department has been set up to assist conservation of present matting through care. Literature will be sent to interested persons upon request.

Plumbing Parts Of Molded Plastic

CHICAGO — Molded plastic stoppers and tail pieces manufactured in all regular sizes have been added here by American Molded Products Sales Co. to its line of molded plastic plumbing specialties.

Developed to conserve critical materials, the new units are said to have improved qualities of freedom from corrosion, toughness, high resistance to adverse water conditions, and lightness.

The plastic stoppers are made in sizes 1-inch, 1⅛-inch, 1¼-inch, 1⅜-inch, 1½-inch, and 1¾-inch. Tail pieces come in two sizes: 1½-inch by 4-inch and 1½-inch by 6-inch.

Arc Welder Standards Covered In Booklet

NEW YORK CITY—"Electric Arc Welding Machine and Electrode Standards," a publication released by Nema, contains standards for both the d-c and a-c arc welders, and standards for rectifier arc welder equipment.

This publication is No. 42-81 and constitutes a complete revision of No. 36-37 on the same subject which was issued in 1936.

The standards for electrodes have been segregated and to them has been added a table for two-color markings for heavy coated ferrous electrode identification.

The booklet may be obtained for 75 cents by writing to the National Electrical Manufacturing Assn. Engineering Department, 155 East 44th St.

G-E Offers Booklet On Designing Plastic Parts

PITTSFIELD, Mass.—General Electric Co.'s plastic department here announces a new 16-page booklet entitled "Designing Molded Plastics Parts." It is an enlarged edition of a similar 8-page booklet issued last year.

The booklet is technical, and is intended for product engineers. Subjects covered include: inserts, shrinkage, tolerances, wall thickness, holes, undercuts, ribs, bosses, fillets, threads, assembly devices, materials, physical properties, chemical and thermal properties, and electrical properties.

EVAPORATIVE CONDENSERS
Full range of sizes
KRAMER TRENTON Co.
Heat Transfer Products
TRENTON, N. J.

ARMY E NAVY
"E" for Excellence
☆ In receiving this joint citation of the Army and Navy, the management and personnel of The Weatherhead Company recognize that the award carries with it not only an honor but a grave responsibility. We will discharge that responsibility by making every effort to increase the flow of vital parts for 'planes, tanks, trucks, ships, combat cars, radios and munitions which Weatherhead plants have been turning out at the rate of millions every day!
Look Ahead with
Weatherhead
THE WEATHERHEAD COMPANY, CLEVELAND, OHIO
Manufacturers of vital parts for the automotive, aviation, refrigeration and other key industries.
Branch Offices: Detroit, Los Angeles, New York and St. Louis

KEROTEST
AIR CONDITIONING VALVES AND FITTINGS
Bring Comfort to the Theatre
KEROTEST MANUFACTURING CO. PITTSBURGH, PA.

Filtrine COOLERS
Stand up to the Rush
No half-cooled water, no breakdowns, when the going gets tough . . . FILTRINE Storage Type WATER COOLERS are built to "take" it. Self-contained coolers, remote type coolers for drinking water and coolers for general industrial use are available in a variety of models and capacities.
Write today for the complete FILTRINE data file, giving complete information on water COOLERS and FILTERS.
In use for almost forty years.
Filtrine MANUFACTURING COMPANY
53 Lexington Ave., Brooklyn, N.Y.

The Machine For Your Next Job...
If it's a refrigeration job . . . no matter how big or how small . . . we can supply Lipman equipment to fit the specifications. Let us work with you.
GENERAL REFRIGERATION DIVISION
Yates-American Machine Co.
Dept. AC-3, Beloit, Wis.
Model 153 Water-cooled Machine
Lipman

Servicing the G-E Scotch Yoke Refrigerator Machine

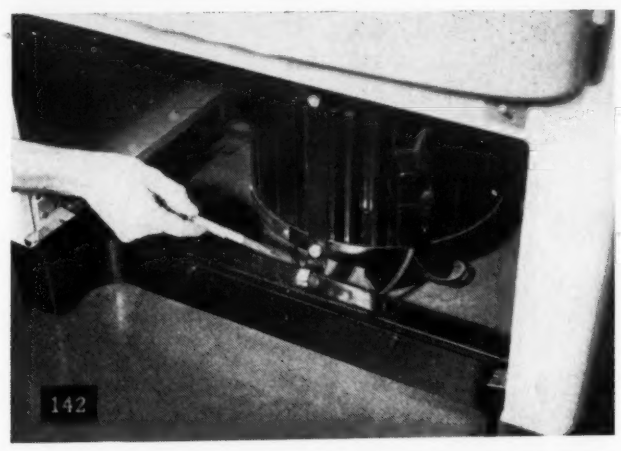
From the General Electric Service Dept. Educational Film of the Same Name

(INSTALMENT 12: DIAGNOSING 'NOISE' COMPLAINTS)

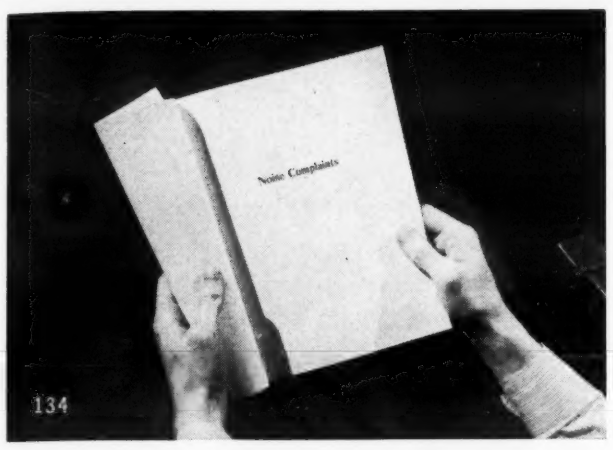
EDITOR'S NOTE: This is the final instalment in a series of excellently illustrated service articles—a published version of "Servicing Scotch Yoke Refrigerator Machines," originally presented as a sound slide film produced by the Products Service Division of General Electric's Appliance and Merchandise Department. The material has appeared in AIR CONDITIONING & REFRIGERATION NEWS by permission of the General Electric Co. The NEWS hopes to start soon another series of such articles covering another make of refrigerator machine.

Previous instalments are:

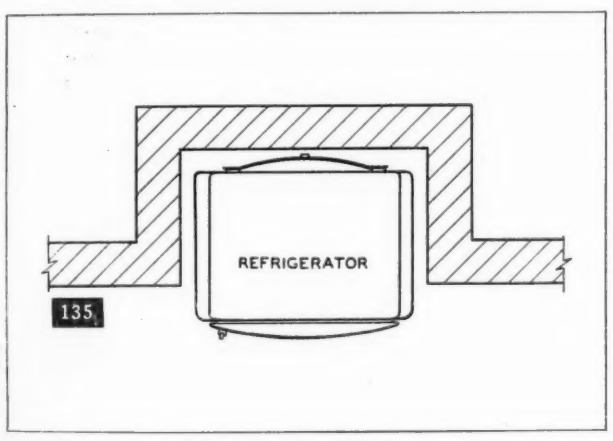
Instalment 1 (Sept. 28)—Principles of Machine Operation.
Instalment 2 (Oct. 12)—Operation of the Temperature Control.
Instalment 3 (Oct. 26)—Finding Out Why Sealed Unit Will Not Run.
Instalment 4 (Nov. 9)—Checking Temperature Control and Starting Relay.
Instalment 5 (Nov. 23) Checking Capacitor and Wiring to Find Trouble.
Instalment 6 (Dec. 7)—"Will Not Run" and "Trips Off on Overload" Complaints.
Instalment 7 (Dec. 21)—Correcting Complaint of "Unsatisfactory Refrigeration."
Instalment 8 (Jan. 4)—Correcting Control Problems and Checking Other Symptoms.
Instalment 9 (Jan. 18)—Discharge Valve Leaks and Stuck Float Valves.
Instalment 10 (Feb. 1)—Cabinet Temperatures Too Low.
Instalment 11 (Feb. 15)—"Ice Freezing Complaints."



(142) Or, in some cases, the front compressor support can be remounted on top of the cabinet cross brace. Other field adjustments include mounting the compressor or condenser on rubber and wrapping the high pressure refrigerant line with heavy rubber tape at the point where it comes out of the bottom of the case. Remember that the noise level of different machines will vary. And even a slightly noisy machine that is refrigerating satisfactorily very seldom has anything wrong that will affect its life or performance.

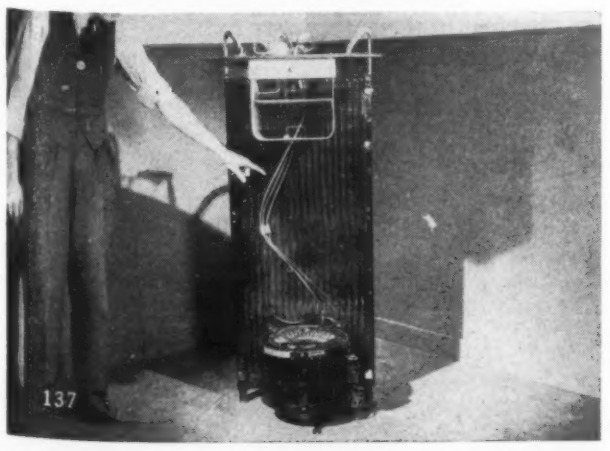


(134) The main operating and performance complaints have now been covered. Noise is the next factor to be considered. Here again, the customer's opinion enters into your diagnosis. However, we will explain what causes certain noise complaints and how you can deal with them. Not all of them by any means indicate that something is mechanically wrong.

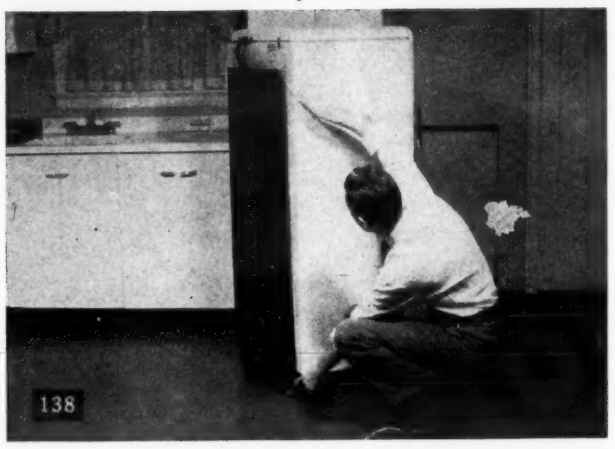


(135) One of the most common occurrences is when the refrigerator stands in an enclosed area. The walls act as a sounding board which amplifies the noise. Moving the refrigerator will sometimes help.

(136) New users frequently question the boiling noise in the evaporator. This is, of course, quite normal and is really an indication of good evaporator performance. It is not generally heard with the cabinet door closed.



(137) Noise complaints are often due to refrigerant lines which vibrate against the cabinet or condenser. They can be bent slightly to over come this.



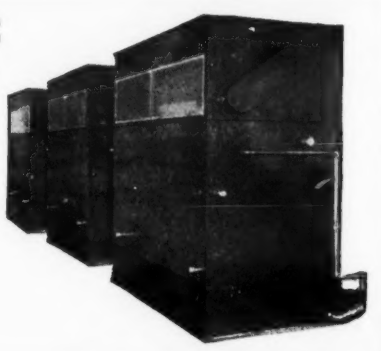
(138) Loose machine and condenser mounting bolts will cause a rattling noise, and should be checked and tightened.

(139) And even dishes or shelves vibrating in the cabinet can result in a noise complaint.

(140) If the compressor seems to be noisy, there are a few things that can be done.

(141) Perhaps changing the level of the refrigerator by tilting it back slightly is all that is necessary.

ACME PRODUCTS
EVAPORATIVE CONDENSERS
Save 85% to 90% on water cost
Reduces disposal problem in proportion
Various Capacities. Write for Catalog No. 27
ACME INDUSTRIES
JACKSON - MICHIGAN



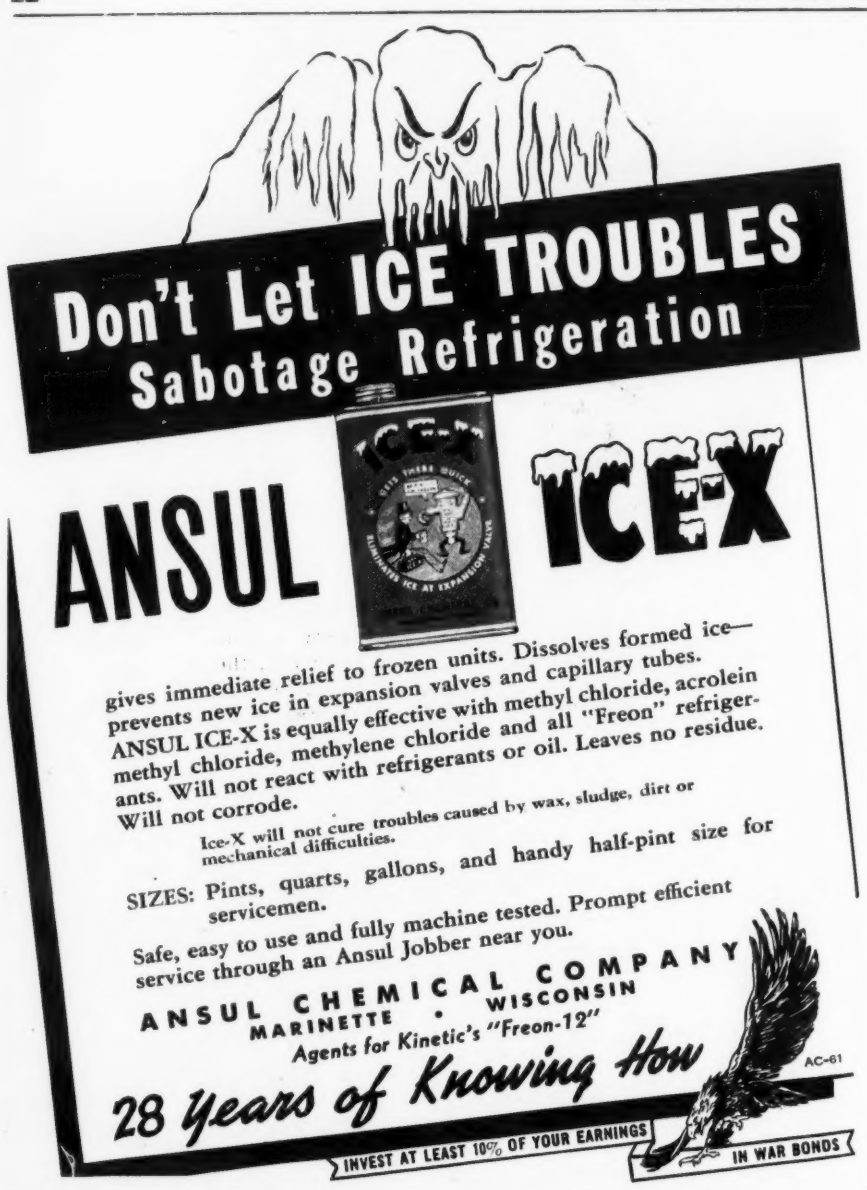
THE STANDARD OF *Enduring Craftsmanship*

The Venetian Glass Industry reached the world's highest technical and artistic perfection in the 16th Century. Here was an art where a common product became a thing of beauty, grace and spirit only if skill and craftsmanship were inherent qualities in the labor of the artisan.

Individual skill and craftsmanship in every department of production are more important today than ever before. They are the foundation stones of enduring reputations in commerce and their presence in a product always insures consumer approval.

VIRGINIA—A NAME THAT HAS EARNED RESPECT

BUY WAR BONDS & STAMPS
"VIRGINIA" REFRIGERANTS
AGENTS FOR KINETIC'S "FREON-12"
VIRGINIA SMELTING CO.
WEST NORFOLK, VIRGINIA
VIRGINIA


Don't Let ICE TROUBLES Sabotage Refrigeration
ANSUL
ICE-X
gives immediate relief to frozen units. Dissolves formed ice—prevents new ice in expansion valves and capillary tubes.
ANSUL ICE-X is equally effective with methyl chloride, methylene chloride and all "Freon" refrigerants. Will not react with refrigerants or oil. Leaves no residue. Will not corrode.
Ice-X will not cure troubles caused by wax, sludge, dirt or mechanical difficulties.
SIZES: Pints, quarts, gallons, and handy half-pint size for servicemen.
Safe, easy to use and fully machine tested. Prompt efficient service through an Ansul Jobber near you.
ANSUL CHEMICAL COMPANY
MARINETTE • WISCONSIN
Agents for Kinetic's "Freon-12"
28 Years of Knowing How
AC-61
INVEST AT LEAST 10% OF YOUR EARNINGS IN WAR BONDS

Los Angeles Service Contractors Combine Program To Stabilize Wages, Train More Manpower

Employers' Group Fosters Number of Progressive Acts

LOS ANGELES—Wartime organization of a manpower training program and successful stabilization of wages at levels satisfactory to both employer and employe have highlighted activities of the Refrigeration Contractors Association, which reaches the halfway mark in its second year of operation in the Los Angeles area this month.

Originally formed in October of 1941 to assist in the solving of common problems confronting all contractors in the Los Angeles area, the Association found itself almost immediately called upon to help in the renegotiation of union contracts between some 15 member contractors and the Refrigeration Fitters Local 508, AFL, when a contract between these groups, expiring in December, 1941, proved mutually unsatisfactory.

To facilitate the drawing up of a new contract, a committee of Association members chosen from those employing union labor was selected to work with the Union, and a new agreement satisfactory to all concerned and incorporating an unusual and jointly beneficial Journeymen's training program was worked out.

Today, the Refrigeration Contractors Association is composed of 58 member companies which, according to C. L. Walling, Association Business Manager, do 80% of the dollar volume of refrigeration contracting (sales and installation work) in the Los Angeles area. Membership in the Association is limited to employers in both high and low pressure equipment companies. Dues of the Association are $2.50 per month, plus special assessments added on the basis of business volume of member companies.

Association membership is broken into six groups, each with a group captain responsible for getting members to attend meetings and to notify members of his group of short-notice functions. As a result of this subdivision of authority and contact, attendance at meetings and interest in the Association's activities are said to be kept at an extremely high level.

Code, Phone Book Work

Formation of the Journeymen's training program and smoothing of employer-employe relationships are but two of several major achievements credited to the Association so far. Other accomplishments claimed by the group during its short life include several of particular note:

1. Through the Los Angeles Board of Building and Safety Commissioners, the Refrigeration Contractors Association instigated a qualification exam which refrigeration contractors must pass in order to obtain a contractor's license, and brought about a redraft of the safety ordinance to include this and to modernize the refrigeration section of the safety code.

2. In a move to improve business methods in the trade, the Association fostered and pressed to passage an ordinance requiring refrigeration mechanics to hold a license.

3. Following a study of telephone book classified listings, action was taken to reduce the number of advertising listings from 31 to 9, resulting in a more compact and legible group of headings under which members of the trade might advertise, and giving consumers a more understandable picture of the various services being offered.

4. While all of these achievements have proven to be of definite value not only to association members, but to other members of the trade, and the general public, according to Mr. Walling, the Association feels that its successful participation in negotiation of the new union contract at the end of 1941, and the establishment of the manpower training course have been especially important.

Wage Agreement Problems

When the committee from the Refrigeration Contractors Association and members of Local 508 met, several major problems confronted them in arriving at a basis for a wage agreement. These included:

1. What would be a fair and equitable wage scale for a qualified Journeyman Refrigeration Fitter?

2. How to define a Journeyman Refrigeration fitter?

3. What method of examination should be used to determine a workman's qualifications as a Journeyman, and who would be the judge in the determination?

4. What arrangement should be made for the training of those members of Local No. 508 who could not qualify by examination as Journeymen Refrigeration Fitters, and who should finance such training?

5. What should be the wage scale of those who failed to pass a Journeyman's examination, yet had been working at the trade for several years and had a Journeyman's card in the Union?

6. What provision should be made for the training of beginners in the trade?

Solution to the problems was found in the establishment of a Journeymen's training program, financed by the employers, set up and jointly administered by a Conference Board composed of four employer members of the Refrigeration Contractors Association, and four members of Refrigeration Fitters Local No. 508.

Recommendations to this effect, endorsed by the committee, including F. V. McKenney, union business agent, who like Walling, had been particularly active in working out details of the program, were submitted to the entire Refrigeration Contractors Association membership. They were approved and so well accepted that several non-union employers decided then to employ union labor.

The Journeyman's Rate

Under the terms of the agreement thus worked out, a standard Journeymen's wage rate of $1.50 per hour straight time was established for those men who secured a certificate of craftsmanship by passing an examination designed to test their qualifications in all branches of the work. Fifteen of the 38 men who took the original exam passed and were awarded certificates.

The balance of the men, plus others in the Union employe group, were enrolled in the Journeymen's training program which was established to provide a two year training period designed to bring all union participants up to Journeymen's qualifications.

Under the training program, classes are held for one four-hour period each week in class rooms provided by the Los Angeles Board of Education. Every phase of refrigeration construction and operation, including work in welding, is covered by the course. Periodic exams are given at the end of one year, 18 months, and 24 months, and after satisfactorily passing the test at any one of these times an employe is given his Journeyman's certificate.

Minimum wage for men in the training program is $1.12½ per hour. Funds for the course are provided by the employer who contributes 12½ cents for each hour's work performed for him by each student journeyman.

The program began in February, 1942 and will end Dec. 31, 1943. Classes are held in the Frank Wiggins trade school here in rooms provided without charge by the Board of Education, and credentials from the program are accepted by the state school system. John C. Blair directs the course, assisted by three other instructors selected from the industry.

The following excerpts from "Agreement for Wages, Hours and Working Conditions" signed by each Refrigeration Contractors Association member employer and Refrigeration Fitters Local 508 are provisions from the new contracts which replace the original unsatisfactory agreements:

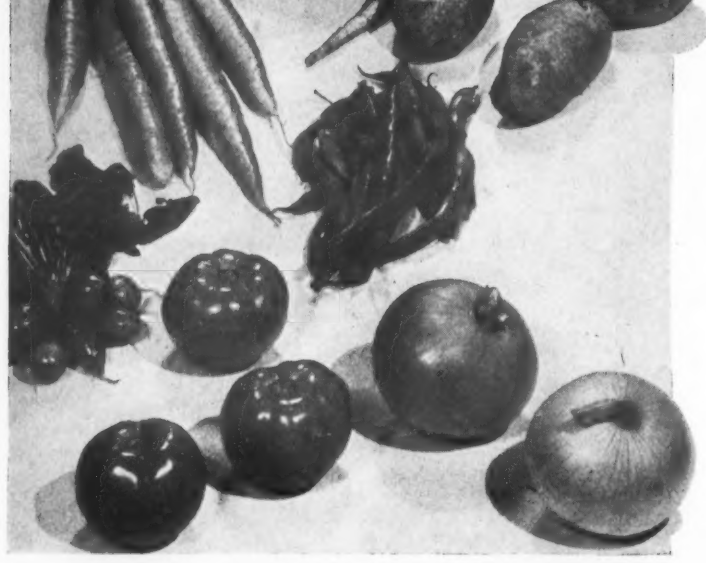
Terms of Wage Contract

"ARTICLE I—Definition of Journeyman Refrigeration Fitter (a) A Journeyman Refrigeration Fitter shall be a thoroughly skilled craftsman, qualified to erect, install, join together, dismantle, adjust, alter, repair and service any and all types of refrigeration equipment for any and all purposes.

"ARTICLE IV—Joint Conference Board (a) A joint conference board shall be established to be composed of four members representing the party of the first part [the employer] and four members representing the party of the second part [The United Association of Journeymen Plumbers and Steam Fitters, Refrigeration Fitters Local No. 508], a chairman from the board members to be selected by the members of the con-

(Concluded on Page 13, Column 1)

It's Time to Tell About Refrigeration's "*Hidden Services*"



. . take

VEGETABLES

for instance . .

America's Vitamin Foods

The snow may be deep outside, but in food stores across the nation the housewife always has a large selection of fresh vegetables awaiting her choice. . . . Crisp lettuce, celery, carrots, peas, beans, and all the rest of the vitamin-rich foods so important to healthful, vigorous living.

Fresh Vegetables in February, hundreds of miles away from their "sunny South" gardens, are possible only because of the miracle of modern Refrigeration. For the "Hidden Services" of Refrigeration started in Fast Freezing Plants, and Cold Storage Plants close to the southern gardens.

Some of these vegetables started their long trip to northern markets packed in crushed ice made mechanically, others in "meal size" fast frozen packages. Protected by carefully controlled temperatures of Refrigerated Railroad Cars, they arrive days later for safe storage — again — in the Cold Storage rooms of Wholesale Fruit and Vegetable Distributors. . . . Thousands of dollars worth of modern refrigeration equipment operates day and night to bring these "Vitamin Foods" to the War Worker's Wife practically garden-fresh.

All along the route from garden to dinner table, A-P DEPENDABLE REFRIGERANT VALVES are doing their part to protect "America's Vitamin Foods." Today, when Mechanical Refrigeration Equipment is asked to work harder, operate longer, and with little or no repair and replacement expense, the proven dependability of A-P Refrigeration Valves is helping vegetable packers, shippers, wholesalers, and retailers maintain smooth, efficient distribution. Food is ammunition. True! But ammunition for U. S. *only* if it is kept fresh.

Model 204 Model 205 Model 215

AUTOMATIC PRODUCTS COMPANY
2450 NORTH THIRTY — SECOND STREET
MILWAUKEE & WISCONSIN
Export Department
100 Varick Street . . New York City

AP DEPENDABLE Refrigerant Valves

A special purchase enables us to make delivery from stock on low pressure and low pressure with hi pressure cutout controls. A large assortment of air cooled condensors up to 3-4 H.P. capacity. Watch this paper for our specials. Large stocks of refrigeration parts and supplies available in both stores. Prompt delivery on P-126 orders.

TED GLOU
CENTRAL SERVICE SUPPLY CO.
409 E. Jefferson St., Syracuse, N. Y. Phone 5-4000
209 Jefferson Ave., Scranton Pa. Phone 3-4000

9-Point Model Wage Agreement Is Developed by W. Coast Contractors

(Concluded from Page 12, Column 5)

ference board . . . (b) All matters of dispute or misunderstanding between both parties to this agreement shall be referred to the joint conference board for decision. (c) The conference board shall have authority to and will in the shortest time possible organize, set in operation and administer a training program for installation and service men now employed in the industry. The board shall establish standards and methods of examination to determine what constitutes sufficient training and experience to qualify men as Journeymen as defined under Paragraph (a), Article I, of this agreement.

"ARTICLE V—Qualifications of Journeymen (a) Party of the first part shall select those men now employed by him that said party of the first part believes have had sufficient training and experience to qualify said man or men as Journeymen . . . to whom said party of the first part is willing to pay the Journeyman wage as hereinafter stated. (b) The names of the men so selected by the party of the first part shall be submitted to the joint conference board for approval. Each Journeyman so approved will be issued a certificate of qualification as being a Journeyman as defined . . . (c) Any member of the organization of the party of the second part has the right to apply to the joint conference board for a certificate as a Journeyman, and after examination and approval by said board a certificate shall be issued.

"ARTICLE VI—Training Program (a) Those installation and service men now employed in the industry that are not selected and qualified as Journeymen as outlined . . . shall be required to participate in a training program provided, supervised and directed by the joint conference board. (b) It shall be the aim of the training program to complete the training of a sufficient number of men to provide necessary Journeymen to properly execute the work required by the party of the first part in not to exceed two years from the date the program is put in operation. (c) Twelve months after the beginning of the training program the joint conference board will conduct examinations and those students of the program that satisfactorily pass said examination and are approved by the board will be graduated and given certificates of a Journeyman as defined . . . (d) After the first year training period examinations will be conducted at each six month period, at which students graduating will be given Journeyman's certificates.

"ARTICLE VII—Wage Scale and Working Hours (a) The wage scale of a Journeyman shall be $1.50 per hour for straight time. The maximum working hours per day for a Journeyman employed in installation work shall be eight hours, beginning at 8 a.m. and ending at 4:30 p.m. with 30 minutes for lunch. The maximum hours per week shall be 40 hours from Monday until Friday, inclusive. (b) The maximum working hours per day for Journeymen employed in service work shall be eight, between 8 a.m. and 6 p.m., and the maximum hours per week shall be 40. (c) All overtime work by Journeymen employed on installation shall be at the rate of 1½ times straight time rate except Sundays and holidays, which shall be double time. (d) All overtime work, including Sundays and holidays, of Journeymen employed in service work shall be at 1½ times the straight time rate.

"ARTICLE IX—Monthly Wages and Hours (b) Journeymen employed on a monthly basis shall be entitled to one week's vacation with pay after one year's continuous employment with one employer."

Provisions for traveling time, shift work, discharging employes, and exemption of firms from the training program are among other points covered in the contract.

* * *

Editor's Note: Formation of the Journeymen's training program by members of the Contractors Association and the Union was designed as a temporary two-year activity, and is scheduled to be concluded in December, 1943. To supply the trade with new manpower after that date, an apprentice course, sponsored by the government, is now running in the Southern California area, with enrollment in the course mandatory for those entering the trade in this section. Details of this training course comprise the second half of this story of Southern California manpower training methods, and will appear in the next issue of AIR CONDITIONING & REFRIGERATION NEWS.

Bill For Licensing Refrigeration Men Up in Providence

PROVIDENCE, R. I.—A bill authorizing the City of Providence to license refrigerating engineers and steam boiler and engine operators was introduced in the State Legislature here Feb. 12. It was accompanied by a resolution from the City Council urging passage.

The measure was introduced by Senator Raymond A. McCabe, Providence Democrat, and was referred to the corporations committee. Under its provisions, no one would be permitted to operate or be in charge of a stationary steam engine or stationary steam boiler of more than 30 horsepower or refrigerating machinery of more than 15 tons in the City of Providence after Oct. 1 without obtaining a license.

License applicants would be required to pass an examination. In cases of revocations, licensees would have the right to appeal to the Bureau of Police and Fire.

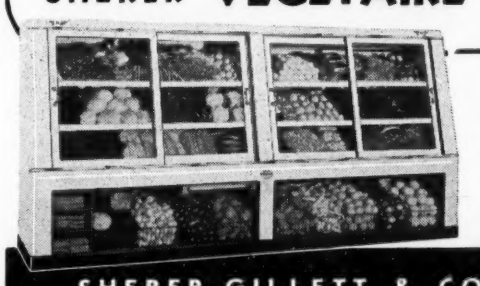
Distributor's Manager Now Ferries Bombers

BIRMINGHAM, Ala.—R. R. (Dick) Carlisle, former manager of Carlisle Electric Co., Westinghouse distributor in this city, is now a lieutenant in the Navy reserve. Prior to joining the Navy he was for a time in the ferry command, helping to fly bombers across the sea.

Speeches Amid Machines, as Midwest Gets Its 'E'

With Norman Ross, NBC announcer as master of ceremonies, Midwest Mfg. Co., is presented the Army-Navy "E" award. In front row at Mr. Ross' left are Midwest employe representatives. At his right are Lt. Col. John Slezak, S. S. Battles, Lt. Alexander Maley, U.S.N.R.

SHERER VEGETAIRE — Limited Number Available Without Priority For Immediate Shipment



Finest produce case money will buy. Builds sales and profits for you. *Write for franchise details.*
Also available—all types of reach-in refrigerators and walk-in cooling rooms for government procurement agencies.

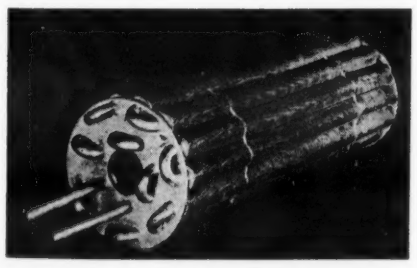
SHERER-GILLETT & CO., MARSHALL, MICH.

Wanted at Once

SHOP MEN IN ALL BRANCHES OF REFRIGERATION
FOR REPAIRING THE FOLLOWING:
HERMETIC AND OPEN TYPE UNITS
COMPRESSORS
COLD CONTROLS
ELECTRIC MOTORS
MOTOR REWINDING
EXPANSION VALVES
EVAPORATORS
PERMANENT POSITIONS
WRITE, STATING EXPERIENCE
SPECIFY DRAFT CLASSIFICATION

SERVICE PARTS CO. 2511 Lake St. Melrose Park, Ill.

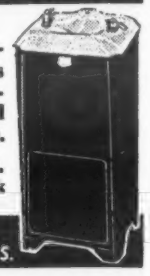
No Joints! No Leaks



This Rome Jointless Water Cooled Condenser is a typical example of Rome's ability to provide trouble free condensing equipment. Rome Water Cooled Condensers are used by many leading compressor manufacturers. Write for complete information.

ROME-TURNEY RADIATOR COMPANY
222 Canal Street
ROME, N. Y.

PURO ELECTRIC WATER COOLERS



Different models available for the various requirements of government agencies and war production plants.
PURO FILTER CORP.
440 Lafayette St., New York
DRINKING WATER SPECIALISTS FOR 40 YEARS.

For: TRUCKS, LOCKERS, COOLERS, COUNTERS AND CABINET CONVERSIONS, use:
KOLD-HOLD PLATES
KOLD-HOLD MFG. CO. LANSING, MICH., U. S. A.

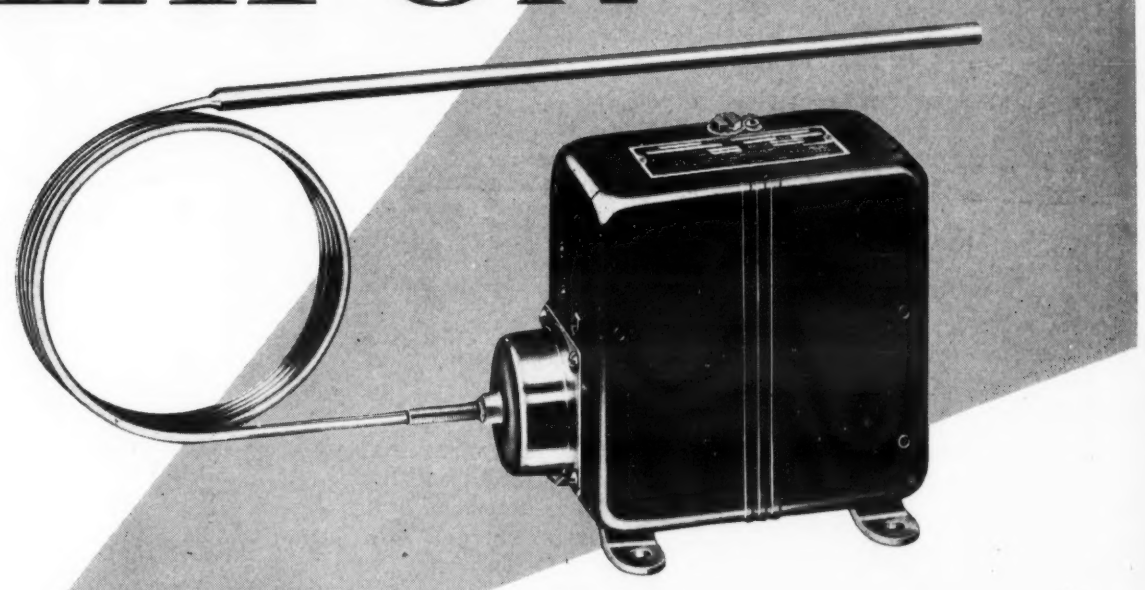
G-E Renews Contract With Frazier Hunt

NEW YORK CITY — Renewal of the General Electric Co.'s thrice-weekly news show begins March 2.

The client's program will present Frazier Hunt, noted radio news analyst and roving reporter, for the products of the Electronics Division of the Radio and Television Department. It is heard Tuesday, Thursday, and Saturday from 6:00 to 6:15 p.m., EWT with rebroadcasts at 10:45 p.m.

General Electric's original order placed Hunt on a 48-station hook-up. During its first year on CBS, three stations were added to this initial network and now in the renewal of the show, 61 Columbia stations including those in Honolulu and Hilo will carry "G.E. News with Frazier Hunt."

WEAPON



FOR

SHOCK TROOPS ON THE HOME FRONT

Refrigeration service men are carrying on one of the most important phases of the war—the war against waste of our critical food supply, and against illness through spoilage of perishables.

Important weapons in this war are Penn automatic controls for commercial refrigeration equipment. Outstanding among these is Avrgaire, pictured above, designed for "above freezing" jobs in walk-in coolers and reach-in cases.

Avrgaire holds temperatures within extremely narrow limits, without erratic short cycling. It provides accurate humidity control and thus prevents shrinkage through dehydration or loss from excessive "sliming." Avrgaire delays defrosting when the box is under an exceptional load, until proper cooling temperature is restored.

War stringency calls for conservation of equipment as well as food. Hence every effort must be made to keep present controls functioning efficiently when that is possible. When new controls are required Penn can supply them under existing priority rules.
Penn Electric Switch Co., Goshen, Indiana.

In Canada, Powerlite Devices, Ltd., Toronto, Ont.

PENN

AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

PATENTS

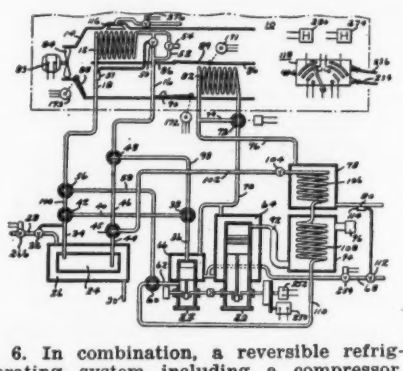
Weeks of Jan. 25 & Feb. 2

PATS—WEEK OF JAN 26 & FEB 2 — 2,309,165. AIR CONDITIONING APPARATUS. Robert W. Candor, Dayton, Ohio, assignor to General Motors Corporation, Dayton, Ohio, a corporation of Delaware. Application July 24, 1937. Serial No. 155,534. 6 Claims. (Cl. 257—3).

Use CHICAGO SEALS
for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

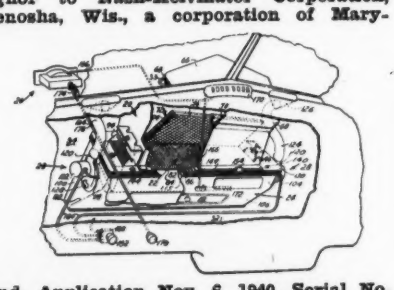
ALCO Specify ALCO Engineered Refrigerant Controls for Maximum Performance
ALCO VALVE CO. ST. LOUIS, MO.

BUNDY TUBING
ENGINEERED TO YOUR EXPECTATIONS
BUNDY TUBING CO., DETROIT



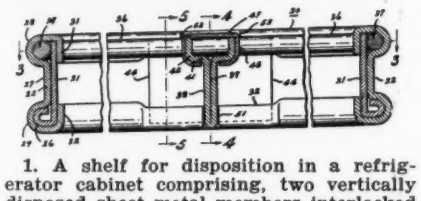
6. In combination, a reversible refrigerating system including a compressor, indoor temperature responsive means for increasing the speed of said compressor as the temperature goes either above or below a predetermined range, and means responsive to the outdoor temperature modifying the action of said indoor temperature responsive means so as to raise said temperature range as the outdoor temperature either decreases or increases beyond a predetermined value.

2,309,202 HEATING AND VENTILATING. Meade F. Moore, Kenosha, Wis., assignor to Nash-Kelvinator Corporation, Kenosha, Wis., a corporation of Maryland. Application Nov. 6, 1940. Serial No. 364,485. 16 Claims. (Cl. 237—12.3).



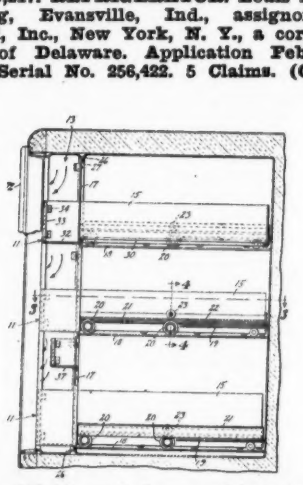
3. In an automobile having a dash panel with a bulge in the center thereof, filter chamber means, a heater core supported beneath said filter chamber means, and a shroud positioned around said heater core, the sides of said shroud extending to said dash panel on each side of said bulge, said shroud being open at the bottom thereof to define a discharge passage which is narrow in the center of said bulge and wider at each side thereof.

2,309,212. REFRIGERATING APPARATUS. Donald H. Reeves, Dayton, Ohio, assignor to General Motors Corporation, Dayton, Ohio, a corporation of Delaware. Application Aug. 15, 1940. Serial No. 352,748. 2 Claims. (Cl. 211—153).



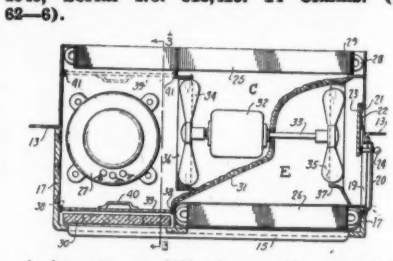
1. A shelf for disposition in a refrigerator cabinet comprising, two vertically disposed sheet metal members interlocked together and each extending continuously around four sides of an open area to provide a bounding frame therefor, a plurality of spaced apart round members extending in one direction only across the open area bounded by said frame to provide the shelf with an article support, all of the spaced apart round members intermediate the sides of said frame being separate therefrom and extending between two opposed sides thereof, and all of the spaced apart round members extending across the open area defined by said frame being substantially parallel to one another and disposed in the same horizontal plane to provide said article support with a flat surface, said round cross members having their end portions bent and interlocked between the two sheet metal members of said frame to cooperate with the sides thereof adjacent the said opposed sides for preventing twisting of the shelf structure.

2,309,217. REFRIGERATOR. Louis Buthenburg, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Feb. 15, 1939. Serial No. 256,422. 5 Claims. (Cl. 62—1).



1. A slidable rack for a refrigerator including a front portion having relatively impermeable walls forming the bottom and all sides thereof to retain cold air therein when said front portion is drawn outside of a refrigerator, the back portion of said rack being an openwork structure to permit free circulation of air therethrough.

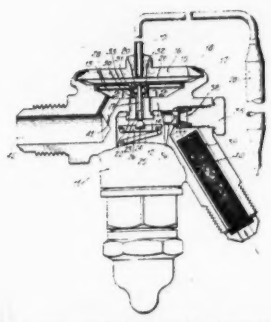
2,309,224. SELF-CONTAINED AIR CONDITIONER. Matson C. Terry and Paul Komroff, Toledo, Ohio, assignors, by mesne assignments, to Matson C. Terry, Washington, D. C. Application Jan. 11, 1940, Serial No. 313,410. 14 Claims. (Cl. 62—6).



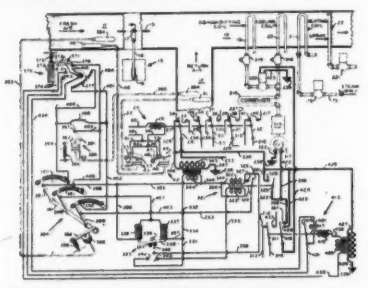
4. An air conditioning unit comprising to be positioned in a window of a space a substantially rectangular casing adapted to be positioned in a window of a space to be conditioned, the front wall and at least a portion of the sides, bottom and top of said casing extending into the space to be conditioned, a vertical transverse partition dividing said casing into two chambers, one of the chambers having an outside opening at the rear end thereof and the other of the chambers having a front air outlet opening and a lateral air inlet opening, one of the chambers containing a motor-compressor unit, a fan, a motor for operating said fan and a condenser substantially co-extensive with said rear opening, the axes of said fan motor and fan being substantially parallel to said condenser, means including a shroud for said fan dividing said last chamber into two compartments whereby the fan is adapted to draw in air through one portion of the condenser and discharge the same through another portion of the condenser, the other of said chambers containing a fan, a shaft leading from said fan motor extending through said partition for operating said last fan, and an evaporator covering the front air outlet and arranged substantially parallel to said condenser.

2,309,405. REFRIGERANT CONTROL VALVE. Harold J. Matteson, Glendale, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California. Application Nov. 27, 1940, Serial No. 367,320. 3 Claims. (Cl. 236—92).

1. In a thermostatically controlled expansion valve: a casing having an inlet and an outlet, a partition separating said inlet and said outlet and having an aperture therethrough, a closure member cooperable with the inlet end of said aperture to control fluid flow through the valve and biased to closed position, a thermostatically-controlled fluid-pressure-operated motor in said outlet, means extending through said aperture and interconnecting said motor and said closure member whereby the same is moved to open position upon increase of pressure in said motor, means forming an extension of said partition at the outlet end of said aperture for guiding said interconnecting means, a tubular member supported by said extension and surrounding the outlet end of said aperture, said tubular member providing a main opening and a restricted opening through which openings all the fluid controlled by said closure member must pass, and means operated by the motor when the same is subjected to pressure in excess of normal for closing said main opening.



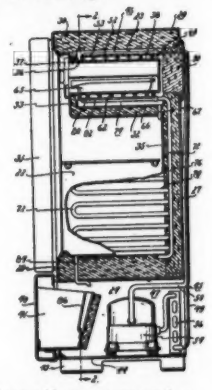
2,309,411. AIR CONDITIONING CONTROL SYSTEM. Leo B. Miller, Bronxville, N. Y., and Henry P. Dever, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Aug. 23, 1935, Serial No. 37,606. 35 Claims. (Cl. 257—3).



1. In an air conditioning system for conditioning a space, in combination, means to heat and cool said space, control means in control of said heating and cooling means, electrical means associated with said control means and operative to vary the control thereof upon said heating and cooling means, a pair of switches wired in parallel in control of said electrical means, means responsive to a space condition in control of one of said switches and means responsive to an external condition in control of the other of said switches.

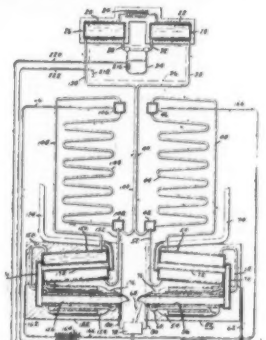
34. In an air conditioning system, in combination, a conditioning chamber, a cooling means, a dehumidifying means and a means for reheating air in said conditioning chamber, moisture responsive means for controlling dehumidification by said first means, and means for preventing operation of said reheating means when dehumidification is not required.

2,309,533. REFRIGERATING APPARATUS. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Dec. 6, 1940, Serial No. 368,846. 8 Claims. (Cl. 62—99).



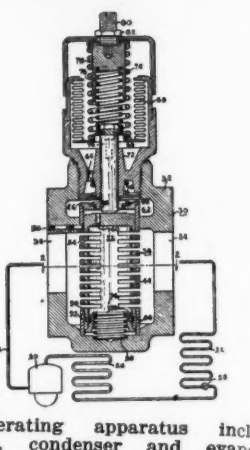
1. Refrigerating apparatus comprising, in combination, an insulated cabinet, a low temperature primary refrigerant evaporator disposed within said cabinet, a closed refrigerant circulating system arranged within said cabinet to enclose a freezing zone and having a portion thereof in thermal contact with said primary evaporator, a secondary refrigerant evaporator arranged within said cabinet to substantially enclose a food storage and refrigerating space and a secondary condenser connected to said secondary evaporator and thermally associated with a portion of said closed refrigerant circulating system.

2,309,756. REFRIGERATING APPARATUS. Don E. Dasher, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Nov. 25, 1938, Serial No. 242,177. 15 Claims. (Cl. 62—5).



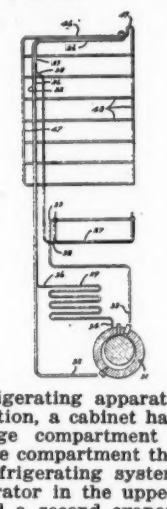
2. Absorption refrigerating apparatus including evaporating means, a plurality of generating means, and a condensing means connected between each of said generating means and the evaporating means; means for alternately heating said generating means, said generating means being charged with a liquid absorbent; means for conducting weak liquor from the generating means being heated to the condensing means connected to the second generating means for absorbing refrigerant from the evaporating means.

2,309,773. REFRIGERATING APPARATUS. Daniel L. Kaufman, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application March 29, 1941, Serial No. 385,908. 5 Claims. (Cl. 62—3).

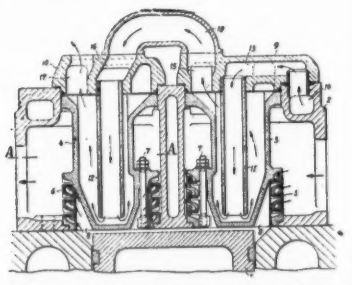


1. Refrigerating apparatus including compressor, condenser and evaporator means connected in a closed refrigerant circuit, a valve means located in said circuit between the outlet of the evaporator means and the inlet to the compressor means, a single pressure operated fluid motor for operating said valve means to open and closed positions, and means for subjecting the pressure operated fluid motor to evaporator pressure when the suction pressure is low and to compressor inlet pressure when the suction pressure is high.

2,309,797. REFRIGERATING APPARATUS. Carl A. Stickel, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Aug. 20, 1941, Serial No. 407,621. 5 Claims. (Cl. 62—99).



1. A refrigerating apparatus comprising in combination, a cabinet having an upper food storage compartment and a lower food storage compartment therein, a closed primary refrigerating system including a first evaporator in the upper part of said cabinet and a second evaporator disposed in heat exchange relationship with said lower food compartment for cooling same, a closed secondary refrigerant circuit containing a volatile liquid and including a condensing portion in intimate heat exchange relationship with said first primary evaporator and an evaporating portion located therebelow and disposed in heat exchange relationship with said upper food compartment for cooling same, conduit means for conveying refrigerant from said first primary evaporator to said second primary evaporator, and said primary refrigerating system including a multiple effect compressor having separate conduit connections with each of said evaporators thereof for withdrawing refrigerant directly therefrom.



2,309,833. ARRANGEMENT FOR THE COOLING OF THE COMPRESSOR SPACE OF AIR AND GAS COMPRESSORS. Wil-

(Concluded on Page 15, Column 1)

HENRY
CARTRIDGE DEHYDRATOR
With Side Outlet and Dispersion Tube
TYPES 150 151
This exceptional design permits easy removal and replacement of cartridge without loosening end connections. Dispersion tube for increasing drying efficiency and minimizing pressure drop is incorporated as integral part of refill cartridge.
Ask your jobber for it.
FILLED WITH SILICA GEL OR ACTIVATED ALUMINA
HENRY VALVE CO. 1001-19 N. SPAULDING AVE CHICAGO, ILLINOIS

SERVICE
We are America's largest jobber of ice cube trays, defrosting trays, etc. Send for our bargain stock list on your letterhead.
REFRIGERATION
THE HARRY ALTER CO.
1728 S. Michigan Ave. Chicago, Ill.
Two Big Warehouses to Serve You
134 Lafayette St. New York, N.Y.

STANGARD PRIME SURFACE
Cold Plates
FOR MAXIMUM EFFICIENT REFRIGERATION
★ FOR Locker Plants, Sharp Freezing, Ice Cream Cabinets, Hardening Rooms, Soda Fountains, Storage Rooms, Milk Coolers, Liquid Cooling, Food Counters and other similar uses.
Write us today for complete information and catalog
STANGARD-DICKERSON CORP.
46-76 Oliver Street Newark, N. J.
Specialists in the Manufacture of all types of COLD PLATES
Stangard facilities are contributing to the production of materials for our National Defense

MECHANICAL REFRIGERATION
THE WATCHDOG OF THE NATION'S FOOD SUPPLY
LARKIN
REFRIGERATION PRODUCTS
USE LARKIN
Humi-Temp Forced Convection Units—Patented CROSS-FIN-COILS—Bare Tube Coils—Zinc Fused Steel Plate Coils—Disseminator Pans—Heat Exchangers—Evaporative Condensers—Instantaneous Water Coolers—
See Your Jobber or Write Direct
LARKIN COILS, INC.
519 MEMORIAL DR., S. E., ATLANTA, GA.

Seamless PENN BRASS and COPPER TUBING
PENN BRASS & COPPER CO ERIE, PENNA.

UNIVERSAL COOLER
MARION, OHIO — BRANTFORD, ONTARIO
WE SELL TO MANUFACTURERS ONLY
UNIVERSAL COOLER CORPORATION
Automatic Refrigeration since 1922

THAWZONE
Fully Protected by U. S. Patents
The PIONEER FLUID DEHYDRANT
HIGHSIDE CHEMICALS CO.
195 VERONA AVE. NEWARK, N. J.

WAGNER MOTORS for All War Needs
Send For Bulletins MU-182 and MU-183. They contain valuable motor information.
Wagner Electric Corporation
6441 Plymouth Avenue, Saint Louis, Mo., U.S.A.

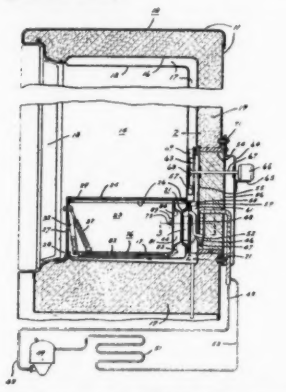
Patents (Cont.)

(Concluded from Page 14, Column 5)

helm Elze, Frankfort-on-the-Main, Germany; vested in the Alien Property Custodian. Application Jan. 15, 1941, Serial No. 374,465. In Germany March 11, 1940. 6 Claims. (Cl. 230—212).

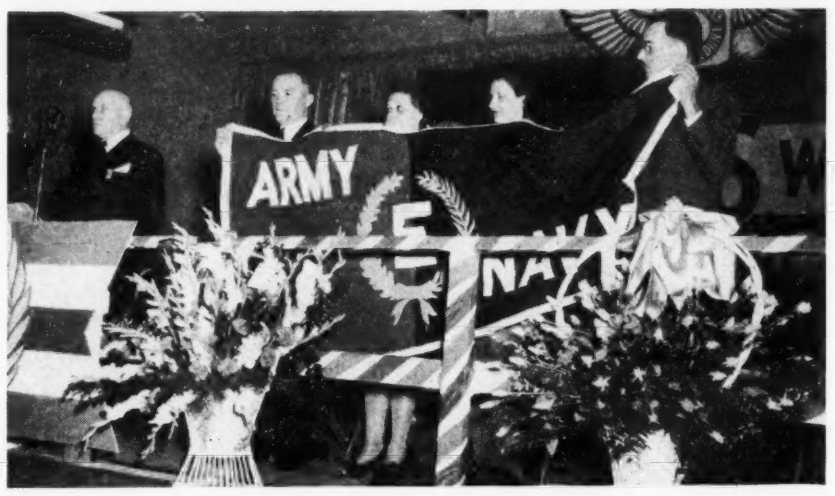
1. Means for cooling the compressor space of air- and gas-compressors with suction valve and pressure valve arranged in the valve head, comprising a plurality of annular valves each arranged with a plurality of ports spaced one above the other, the free inner space within these valves being cooled by a liquid, and hollow valve carrier inserts projecting into the interior of said valves and through which the cooling liquid flows.

2,310,117. REFRIGERATING APPARATUS. Donald H. Reeves, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application April 25, 1941, Serial No. 390,373. 9 Claims. (Cl. 62—116).



1. A refrigerating apparatus comprising in combination, a cabinet having a food storage chamber therein, an evaporator of a primary refrigerating system for cooling said chamber to a temperature above the temperature at which water freezes, means forming a compartment within said chamber, means within said compartment for normally maintaining the interior thereof at a temperature below the temperature at which water freezes, said last named means forming a closed secondary refrigerant circuit having a refrigerant condensing portion in intimate thermal contact with a part of said primary evaporator and a refrigerant evaporating portion upon which moisture collects in the form of frost, and said secondary circuit forming means being detachable from said primary evaporator and removable from said compartment whereby frost may be melted therefrom by application of heat thereto exteriorly of said chamber.

Servel Prepares To Fly Its 'E' Pennant



The coveted Army-Navy Production Award pennant is accepted for workers of Servel, Inc., by Louis Ruthenburg, president (at the microphone). Holding the flag are, left to right: Geo. S. Jones, Jr., vice president and general sales manager; two of Servel's women employes; and August Horstman, president, Servel Employes Association.

G-E Offers Wartime Nutrition Data

BRIDGEPORT, Conn. — General Electric Co. is offering to home service directors, home economists, and university instructors copies of the instructor's manual and master guide to a "Wartime Nutrition and Homemaking" course already given to thousands of G-E employes through the Home Service section of the company's Appliance and Merchandise department.

The publication contains complete instructions for presenting the course in either three or four three-hour periods. Contents are indexed into seven divisions: four individual lesson plans; receipes of foods used during the lectures; propertities needed for demonstrations; and a plan for promoting the course.

Information has been checked and reviewed by the Nutrition division of the Office of Defense Health and Welfare Services in Washington, D.C.

G-E's course covers these subjects:

1. Importance of nutrition in everyday life.
2. Basic principles of meal planning.
3. Simple use of enriched flour and breads.
4. Using alternate foods.
5. Buying and storage of food.
6. Emergency Wartime Homemaking.
7. Conservation of light and importance of good light to health.
8. Blackout procedures.
9. Lunch boxes for the war worker and school lunch.
10. Laundry methods.
11. Use and care of laundry equipment.
12. Care of appliances.

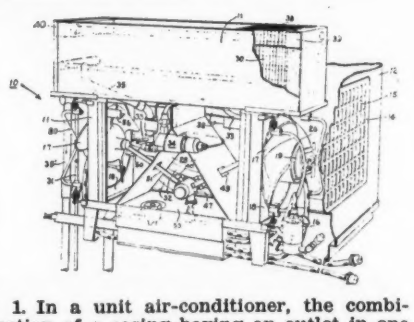
The last subject is covered in a section of lesson four called "Helpful Hints and Use and Care of Applinaces." It deals with the range, refrigerator, small appliances, and washers and ironers.

Each lesson plan outlines objectives of the lesson, presents lecture material covering these objectives and pictures visual aids to use in demonstration. The manual also gives suggestions for awarding attendance certificates, signing a Victory Pledge, distributing buttons, and planning special monthly follow-up meetings for graduates of the course.

Requests for the master guide or for information about the course should be addressed to Edwina Nolan, manager; Home Service Section; General Electric Consumers Institute, Bridgeport, Conn.

REISSUE

22,261. AIR CONDITIONING APPARATUS. Milton Kalischer, Longmeadow, Mass., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Original No. 2,013,756, dated Sept. 10, 1935, Serial No. 698,205, Nov. 15, 1933. Application for reissue Feb. 7, 1940, Serial No. 317,781. 4 Claims. (Cl. 257—9).



1. In a unit air-conditioner, the combination of a casing having an outlet in one side and opposed inlets in two opposite sides adjacent the first-mentioned sides, a heat-exchanger disposed within the casing adjacent the outlet, propeller fans positioned with their axes of rotation in alignment with said inlets for effecting flow of air from each inlet inwardly toward the other inlet, a deflector of V-shape, disposed between said fans with the bottom or point of the V toward the outlet, for deflecting the air toward he outlet, the sides of the deflector having openings therein, and a fitting disposed within the V-shaped deflector having nozzles for directing streams of water through said openings into the air streams to humidify the air.

4. In a room cooler, the combination of a casing, an evaporator therein, means for conveying air through said casing and in contact with said evaporator, a heat exchanger, means for conveying liquid refrigerant for said evaporator and vaporizing refrigerant exhausted from said evaporator in heat exchanging relation with each other in said heat exchanger, said heat exchanger comprising a double tube coil arranged in convolutions in a vertical plane adjacent a vertical wall of said casing.

Bastian-Blessing 1942 Income $529,015

CHICAGO — Bastian-Blessing Co. reports its net income for the year to Nov. 30, 1942 as $529,015, equivalent to $2.86 each on 173,825 shares of common stock. Figures for the similar period in 1941 show a net income of $971,485, or $5.40 per share.

CLASSIFI D ADVERTISING

RATES for all other classifications, 10¢ per word, minimum charge, $5.00 per insertion. Three consecutive insertions, 25¢ per word, minimum charge, $12.50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

EQUIPMENT WANTED

WANTED TO BUY: Any condition. Air conditioning and refrigeration machinery and systems, reciprocating and centrifugal. E. M. FAIRBANKS CO., 333 Fifth Ave., New York City.

WANTED: Used Commercial Refrigeration and Air Conditioning. Also new or used stokers. THE BIMEL CO., 305 Walnut St., Cincinnati, Ohio.

WANTED: Parts for Electric Ranges. We will buy any lot large or small for cash. Send us list specifying items and prices wanted. MILLER & SEDDON CO., INC., 2089 Massachusetts Ave., Cambridge, Mass.

DEALERS, DISTRIBUTORS, manufacturers, will buy new in crates ¼, ⅓, ½ HP. condensing units, and ice cream cabinets. Box 1434, Air Conditioning & Refrigeration News.

WANTED: Refrigeration parts. We will buy any lot, large or small, of usable refrigeration parts for either domestic or commercial for cash. Send us list and price wanted. MILLER & SEDDON CO., INC., 2089 Massachusetts Ave., Cambridge, Mass.

EQUIPMENT FOR SALE

COMPLETE high side Frigidaire, ⅓ to ½ H.P., air cooled, less motor, $15.00. ⅓ to ½ H.P. air cooled condensers, $6.00. ⅓ to ½ H.P. 2 cylinder Frigidaire compressor, $7.00. All used in good condition F.O.B. EDISON COOLING CORP., 310 E. 149th St., New York City.

CARRIER condensing units: ¼, ⅓, ½ H.P. complete with motors. Available for immediate shipment—No priorities necessary. GENERAL REFRIGERATORS CORP., 678 Broadway, New York, N. Y.

ONE F-15-WH using Freon, water cooled with 5 H.P. motor, 220 volts, 3 phase, 60 cycles with starter. One FJ-5-WH using Freon, water cooled with 7½ H.P. motor, 220 volts, 3 phase, 60 cycles with starter. FUEL CITY METAL WORKS, INC., Stiles St., Clarksburg, W. Va.

GENERAL ELECTRIC motors: ½ H.P. A.C. 1725 R.P.M. 110-220 v. Frigidaire compressors ⅛, ¼, ⅓ H.P. Receivers—⅛, ¼ H.P. Fedders condensers—¼, ⅓ H.P. Cook frozen malted machines. GENERAL REFRIGERATORS CORP., 678 Broadway, New York, N. Y.

POSITIONS AVAILABLE

SERVICE MAN for commercial refrigeration and air conditioning equipment. Permanent position with excellent opportunities for right man. Position located in Northeastern Ohio. State qualifications and enclose snapshot first letter. Box 1433, Air Conditioning & Refrigeration News.

TWO SHOPMEN, foremen, two servicemen, experienced commercial or domestic. Essential civilian, hospital, war-work. This is a permanent position with a good salary for those who want to settle in New York City with a company established for 12 years. Box 1435, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

IF YOU want distribution in the New Orleans area we can serve as distributor or manufacturer's agent. Main branch in New Orleans. There are many War Plants here who urgently need your equipment, as well as many war agencies. Manufacturers interested write Box 1432 Air Conditioning & Refrigeration News.

CORDLEY Electric WATER COOLERS
ALL SIZES FOR SHIPBOARD AND LAND USE MEET GOVT. SPECS.
CORDLEY & HAYES, NEW YORK, N. Y.

DOLE
VACUUM PLATE COOLING & FREEZING UNITS
CHICAGO

THE EMBLEM OF QUALITY
EBCO Electric Water Coolers
WRITE FOR DETAILS
The EBCO Manufacturing Company
401 W. TOWN STREET COLUMBUS, OHIO

Established CURTIS REFRIGERATION AIR CONDITIONING ... COMMERCIAL 1854
Curtis Refrigerating Machine Division
of Curtis Manufacturing Company
1912 Kienlen Ave. St. Louis, Mo.

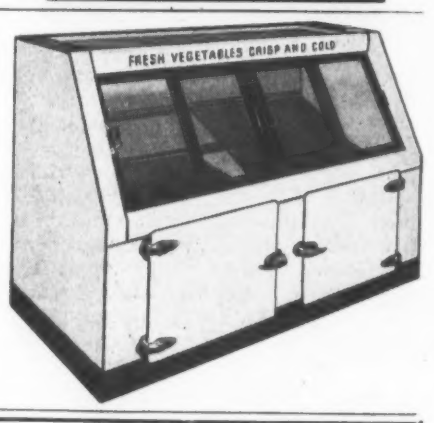
RECOLD COILS WATER-DEFROST
CANADA PAT 394 209 U.S. PAT. 2,219,393 NEW ZEALAND PAT 82-359
REFRIGERATION ENGINEERING Inc.
LOS ANGELES - CALIFORNIA

PHOTOGRAPHIC PROCESSING EQUIPMENT
Controlled Temperature Film and Print Developing Equipment. Cooling Units for X-Ray Developing Tanks. High Speed Film and Print Drying Equipment. Controlled Temperature Photographic Processing Sinks.
TEMPRITE PRODUCTS CORPORATION
41 Piquette Avenue Detroit, Michigan

MASTER FOOD CONSERVATORS
have the call. This Modern Food Conserver has many unusual advantages. Sold only through distributors of refrigeration and insulation.
Get our proposition
MASTER MANUFACTURING CORP.
121 Main St. Sioux City, Iowa

MARSH
Gauges . . . Dial Thermometers
Recorders . . . Valve Specialties.
JAS. P. MARSH CORPORATION
2067 Southport Ave., Chicago, Ill.

TRY TYLER
Tyler's amazing progress in recent years represents a trend that will continue in the future. Investigate the profit possibilities for Tyler distributors; tie up with Tyler for long-swing prosperity. Write today. TYLER FIXTURE CORP., NILES, MICH.



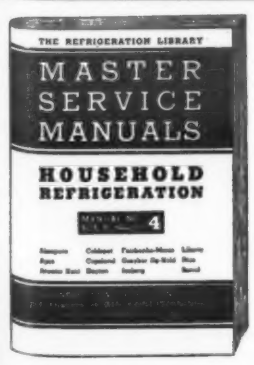
3 CATALOGS IN 1
HERMETIC UNITS - COMPRESSORS - PARTS
FRIGIDAIRE - KELVINATOR - NORGE - G-E
Complete Line Refrigeration Parts - Tools - Supplies
WRITE FOR YOUR COPY ON YOUR LETTERHEAD
SERVICE PARTS CO.
MELROSE PARK, ILLINOIS

REFRIGERATION PRODUCTS
fedders
BUFFALO, N. Y.

PAR COMMERCIAL REFRIGERATION UNITS FOR PROTECTION OF VITAL FOOD SUPPLIES
See Your Par Jobber
LYNCH MANUFACTURING CORP.
DEFIANCE, OHIO, U.S.A.

HEAT TRANSFER EQUIPMENT
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

CHARGED DAVISON'S IN SILICA GEL WITH OUT
Specify DRYERS THAT BEAR THIS LABEL
Ask your Jobber



Manual No. 4
In this 136-page book you will find a great deal of information that is practically unobtainable elsewhere. Unusual service problems are clearly explained.

Let this book help you solve difficult service problems—Manual No. 4

Your refrigeration library is incomplete without this manual. This is the fourth of the series of Household Service Manuals and you need it to solve many of your most perplexing service problems. Gives complete information on the following 12 makes of household refrigerators:

Absopure	Copeland	Iceberg
Apex	Dayton	Liberty
Atwater Kent	Fairbanks-Morse	Rice
Coldspot	Graybar Ilg-Kold	Servel

Some of these brands are on the market now, others are no longer being sold, but thousands are in use today which will require service. The service season is rapidly approaching and this book will be of great practical value to you on these models. Order your copy today. 136 pages. Price $1.

BUSINESS NEWS PUBLISHING CO.
Publishers of Air Conditioning & Refrigeration News
5229 Cass Ave., Detroit, Mich.

GUARD DUTY
Guard duty over food supplies is just one of RANCO'S wartime jobs. Our biggest job is using our modern plant facilities to make vital instruments for the armed forces.
RANCO Inc. Columbus, Ohio

Refrigeration Products That Are Listed In CMP Class B—Group II

(Concluded from Page 1, Column 5)

Group II products. Apparently, the procedure on such products will be for the WPB Industry Eranch to make application for allotments of raw materials on the basis of applications made to it by manufacturers in the industries it represents. Then presumably the manufacturers will dole out the products on the basis of preference rating patterns from their customers.

The following list covers all types of refrigeration equipment and machinery which are considered "B" products by the Refrigeration & Air Conditioning Section, General Industrial Equipment Branch, WPB:

Refrigeration Products In Class B—Group II

Air-conditioning units and systems

Self - contained air - conditioning units: Window-type units, room coolers, store coolers.

Central-station-type air-conditioning systems: Adsorption systems, circulating-water systems, direct-expansion systems, steam-jet systems.

Refrigeration units and systems

Household refrigeration units, 16 cu. ft. or less (self-contained): Electric, gas, kerosene, ice.

Commercial refrigeration units

Electric commercial refrigeration units:

Insulated enclosures: Walk-in refrigerators, self-contained, remote with cooling coils, remote without cooling coils.

Reach-in refrigerators: Self-contained, remote with cooling coils, remote without cooling coils.

Under-counter refrigerators: Self-contained, remote with cooling coils. Back - bar refrigerators: Self - contained, remote with cooling coils.

Beverage-cooling cabinets: Self-contained; dry-type, wet-type; remote with cooling coils; dry-type, wet-type.

Frozen-food storage cabinets: Self-contained, remote with cooling coils.

Mortuary refrigerators.

Cold storage doors.

Display cases, electric:

Single-duty: Self-contained, remote with cooling coils.

Full-vision: Self-contained, remote with cooling coils.

Vegetable: Self-contained, remote with cooling coils.

Florist: Self-contained, remote with cooling coils.

Wall cases: Self-contained, remote with cooling coils.

Frozen-food: Self-contained, remote with cooling coils.

Beer-dispensing equipment, electric

Tap-stands: With storage cooler (remote), without storage cooler (remote).

Direct-draw: Self-contained, remote.

Novelty boxes: Self-contained, remote.

Circulating sweet-water bath (remote).

Ice Cream Freezing and Dispensing Equipment, Electric

Counter freezers: Self-contained, remote.

Soda fountains: Self - contained, complete, fountainettes; remote; complete, fountainettes.

Ice cream cabinets: Self-contained, dispending, hardening; remote; dispensing, hardening.

Drinking-water coolers: Self-contained, remote.

Professional and scientific refrigeration units (electric)

Blood plasma cabinets; self-contained, remote.

Instrument-testing cabinets; self-contained, remote.

Industrial refrigeration units

Rivet coolers (electric); self-contained, remote.

Cutting-tool coolers (electric); self-contained, oil, coolant, remote; oil, coolant.

Water coolers, industrial (electric); self-contained, remote.

Milk coolers; electric, ice.

Ice-making plant units and systems (electric)

Brine-plant systems.

Ice-makers; portable, instantaneous.

Cube ice-machines; self-contained, remote.

Cold-storage plant systems (electric); above freezing, low-temperature, locker-plant, cold-storage doors.

Air-conditioning and Refrigeration Components and Accessories

Compressors; reciprocating, centrifugal, rotary.

Condensing units, stationary:

Air-cooled:

Gasoline-powered; engine-generator drive, direct drive.

Electric-powered; with motor, without motor.

Water-cooled:

Gasoline-powered; engine-generator drive, direct drive.

Electric-powered; with motor, without motor.

Condensing units, mobile (air-cooled):

Gasoline-powered, truck type; engine generator drive, direct drive.

Electric-powered, truck type; with motor, without motor.

Railroad type.

Heat exchanger equipment

Shell and tube units.

Shell and coil units.

Evaporative condensers.

Aerators.

Finned evaporators and finned condensers.

Unit coolers:

Suspended type; ceiling mounted, panel type, horizontal discharge.

Floor mounted type.

Plate type coils.

Suction-line heat-exchangers.

Refrigeration Valves and Switches

Valves:

Float valves, high pressure, low pressure.

Expansion valves; thermostatic, automatic, manual.

Magnetic valves.

Line valves; packed, packless.

Service valves: Compressor valves, condenser valves, receiver valves, relief valves, charging valves, purging valves, drain valves.

Magnetic compressor by - pass valves.

Check valves.

Suction pressure regulating valves: Throttling type with solenoid, throttling type without solenoid, snap action type.

Brine line valves: Hand type, magnetic type, thermostatic type, pressure type.

Water line valves: Hand type, magnetic type, thermostatic type, pressure type.

Switches: Float switches, high pressure switches, low pressure switches, combination high and low pressure switches.

Thermostatic switches; household refrigeration switches, commercial refrigeration switches, air conditioning switches.

Miscellaneous components: Refrigerant receivers, surge drums and tanks.

Refrigerant accumulators: High pressure, low pressure.

Accessories: Oil separators, refrigerant strainers, liquid indicators, dehydrators, manifold tubes and bars, fusible metal plugs, fusible metal unions.

GET BUSY!

We have made a discovery. One letter . . . one little letter . . . and "BUSH" becomes "BUSY" Simple, isn't it?

Actually it isn't quite as simple as it looks. It took a war to make us THIS busy . . . and it took an engineering blitzkrieg to push production so far and so fast. But . . . it took conscience to remember that a lot of Bush representatives wanted to be busy too . . . and it took guts to keep on remembering it and DO something about it.

In your case being busy really IS just as simple as a single letter . . . or at most a personal call. Business is everywhere . . . more business than you ever dreamed. It's just in different places . . . places like war plants, plants supplying essential civilian needs, services contributing to either military or civilian health, mobility or morale. Business is merely a matter of SUPPLY!

Bush realizes that its representatives must continue to sell and service . . . that parts must be available . . . that engineering must be on call . . . that new epuipment, within reasonable limitations, must be ready. All this has been done . . . is being done . . . IN ADDITION to meeting the tremendous demands which are being made upon Bush productive facilities and personnel by direct war production.

So . . . get BUSY with BUSH. And remember that the letter . . . the one little letter . . . or the personal call . . . must be YOURS. We, and a war, supply everything else.

BUSH MANUFACTURING CO.

Commercial Cooling Units

HARTFORD CONN · 415 LEXINGTON AVENUE NEW YORK · 549 W. WASHINGTON BLVD. CHICAGO